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UNIVERSITY OF ALBERTA

ALIENATION AND INTEGRATION:
ENVIRONMENTAL EDUCATION IN TURTLE ISLAND

BY

© JOSEPH WILLIAM SHERIDAN

A THESIS
SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH
IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR THE DEGREE OF DOCTOR OF PHILOSOPHY
IN
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The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research for acceptance, a thesis entitled *Alienation and Integration: Environmental Education In Turtle Island* by Joseph William Sheridan in partial fulfillment of the requirements for the degree of Doctor of Philosophy in International/Intercultural Education.

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Harvey A. Scott, Examiner

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Date: June 1, 1994

DEDICATION

This thesis is lovingly dedicated to the memory of

Linda Mary Akan

1955-1993

If one were to try to give a metaphorical description of some of the features of First Nations thought,
one might say that they go to school in dreams, write in iconographic imagery, travel in Trickster's vehicle, and always walk around.

ABSTRACT

From the 1890s and continuing to the present, the appeal to First Nations thought in environmental education, outdoor education, and conservation education has been one of alienation and misappropriation of indigenous ideas from their culture-specific origins. A series of six separate articles, this work is a proposal for the information of environmental education to be based on models provided in First Nations cultures, while recognizing culture-specific requirements for authoritative representation of First Nations cosmologies. Both a general and a specific redirection is called for. The specific redirection is to the use of story and experiential learning. The general redirection is to the model of First Nations ethos in the construction of meaning of the natural environment. The realization of that general redirection would be for environmental education to be based on processes of local observation of local "place." First Nations principles would direct us to observe the local operation of the principles and dynamics of the interconnectedness of living things with "place." Topics discussed in connection with this proposed redirection of environmental education are (a) the media of orality and literacy; (b) the current predominant paradigm in environmental education and its foundation upon the collection and organization of information; (c) dualism, in connection with a Western European concept of wilderness, and the necessity to resolve the alterity implied in that concept, and (d) a review of Kieran Egan's ideas about storytelling.

ACKNOWLEDGEMENTS

Temptations to become a scholar multiplied after an industrial accident ruined my back while a deck-hand aboard the *Montmorency,* a Lake Huron search and rescue ship. I would have been amply satisfied to have turned forty as bartender, road manager, or Rocky Mountain log builder. Yet, these proved to be the pursuits of diaspora. My home is as much in the book as in the Pre-Cambrian shield and the time has come to undertake a return. At forty one ponders the ground with the unsettling anxiety and strange comfort that comes from knowing that sooner or later it will be home. These dynamics aside, there is a deep human richness and legacy to the idea of home as I have come to understand it after being so long without a home during my academic pilgrammage of the last twenty two years. Perhaps this is why aboriginal tradition has been so influential in my thought.

My formative influences were my grandfather, Bill Sheridan, a boat-builder, and Philomene Chechock. Her grasp of Ojibwe and the duties of living ethically in the largest concentration of islands in the world waltzed with my grandfather's sensibilities.

I was next taught the virtue of seeing the world as one big union by the Industrial Workers of the World - especially Fred Thompson, Utah Phillips, Paul Dube and Denis Green. No appreciation of the Wobblies would be complete without thanking the Norse wit of Bruce Brackney and the supportiveness of Margaret Potter.

Subsequently, I have to recognize and thank the intricate and beautiful explanations I was honoured to receive from Linda Akan and from Walter Lightning's outstanding scholarship. Too, I owe thanks to numerous students from the School of Native Studies and the Faculty of Education, especially Brenda Bird and Andrew Jackson.

There would have been no possibility of this work coming to fruition without the compassionate mind and brilliant assistance of Carl Urion. After plying my trade at Harvard, U.C.L.A., and N.Y.U., I only found real satisfaction, respect, and synchronicity with Carl's thought here in Alberta. That may, in part, owe to our mutual fascination with Wyoming. Nevertheless, it is magic. Where else could one work directly with such top flight First Nations professors ?

I thank Oscar Ochs of N.Y.U. for inspiring me to leave New York and return to the Great Plains.

I curse the fact that the University of Alberta's central administration always seems to do too little, too late, and not often enough, to support the loving labours of those who work for our partnership with First Nations. I hope this embarrassment is curtailed but am certain it will not happen without struggle. Every success then to this struggle!

As well as Carl's assistance, I thank his family with whom I have had a terrific comfort. In addition to thanking my committee I wish to thank Eric Higgs and Sheila Gallagher, Peggy Wilson, Minnie Freeman, Julian Martin and Geneva Moore, David Schindler and Suzanne Bayley, Sandra Niessen, Ray Morrow, Barb Shockal, Joan White, and Jennifer Kowal. And graduate students Bob Turner and Steve Mather.

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I wish to thank the Faculty of Graduate Studies and Research for providing me with a Presidential Recruitment Scholarship and the Department of Educational Foundations for providing me with the academic freedom to develop my own courses. Thanks especially to John Young for his alliance in settling an important wage dispute in my first semester. Finally, Don Oliver's late addition as external examiner was a welcome and crucial development to the success of this endeavor. Had Alberta not taken me I would have been in Cambridge to think these ideas through with him. To all of you, my most sincere thanks.

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CHAPTER I. INTRODUCTION

This work is a series of six papers each of which may be read as a separate work. A central concern relates the separate works. Some kind of characterization of the way Native North Americans conceptualize natural surroundings and natural processes has been part of the conservation ethic of settler culture for a very long time. Much of the time that characterization has represented a misappropriation of Native ideas. The separate works in this dissertation constitute an exploration of a very few seminal ideas that indigenous cultures in North America have provided us, and the central concern of the works is the expectation that those ideas might inform the practice of environmental education.

This work thus reflects a partisan's perspective. I believe that environmental education needs not just a new direction but a reorientation. I expect this work to reflect the bias that I admit with that statement.

The two earliest papers are arguments which I can no longer support, so their inclusion documents a change in perspective. They are included here not only because they reflect a personal history of discovery, but for instruction: the arguments are not uncommon in the literature about media, orality, and literacy, and I hope to show how following those ideas led me to reject some of the common premises upon which the early arguments were based.

When I began this work I proposed to study the influence of alphabetic literacy on Native North American concepts of nature. There is an academic tradition of the study of literacy and orality which would validate that as a methodologically sound thing to do. The media determinism in the theoretical discourse on literacy and orality that lay at the heart of the question was so problematic that clarification was required before any reasonably achievable protocols for field study could be established. In attempting to clarify the argument I discovered that the assumption of determinism would so inform observation that I would inevitably end up with a tautology. It was exciting to discover, however, that it was apparently not the medium of orality that determined the way First Nations tradition honoured the natural environment, but an ethos of the identity of—not "relationship between"—humans and nature. In the conception of nature based on that ethos, I found that ideas about human identity with specific places provided a direction in which to explore a concept of place. Native stories are good examples of how the concept of place provides meaning for human situations.

How precepts that come from that ethos might serve as foundational to environmental education became the next concern. My goal was to discuss the accomplishment of Native North American oral tradition, in its relationship to place, to illustrate the shortcomings of an environmental education which has ignored or misappropriated tens of thousands of years of indigenous thought about the human identity with North America.

I also sought to evaluate environmental education's implication in the cosmology of modernism, and to demonstrate thereby that its foundations are in desperate need of re-thinking. Last, I tried to respond to two overarching concerns. The first was laid out in Oliver's and Gershman's (1989) call for the development of a symbol system and a discursive tradition that would more coherently provide meaning about nature that would be coherent with nature and with the way people feel about it, in it. Oliver and Gershman approach this issue as process philosophy. Second, I have attempted to point to the neglected role of place in the construction of meaning in environmental education. In common sense terms, it is as though the experience of a favorite tree and place are tangential complements to a legitimated construction of nature found in the field guide. I believe that environmental education must change to recognize that its legitimacy originates in the specific individual's lived experience of being in nature, rather than in management of abstract principles about nature.

The First Statement of the Issues: Media and Environmental Education

The Nature of Orality and the Orality of Nature

In the second chapter, "The Nature of Orality and the Orality of Nature," I argued that the epistemological and cognitive, psychodynamic qualities attributed to the oral mind by Walter Ong were consistent with qualities attributed to ecosystems in environmental literature. I concluded that the apparent consistency had something to do with technological intervention: in an oral tradition there is no intervening technology of transcription between meaningful content and the human beings who live with those meanings. Likewise, natural ecosystems can be seen as systems that operate independently of intervening human technologies.

I saw symmetry between the oral tradition of First Nations peoples and natural ecosystems. The referential systems of Native North Americans are rich in metaphor about natural ecosystems. I assumed that the symmetry I saw was the result of something that was missing from both oral tradition and natural ecosystems: industrial technology. In making that assumption I overlooked human volition. Native people's oral traditions are realized by people who do not simply acquire those traditions and then transmit them, their actions being determined by the culture which they acquire. Rather, Native traditions are lived by people who in fact actively and self-consciously foster those traditions, who examine and test the ethos by which they live, and who test themselves with reference to that ethos. With an argument that was both cultural-deterministic and media-deterministic, I implicitly invoked speculation about Golden Ages and Noble Savages.

The idea of symmetry between mind and nature, media determined or not, was the central impulse for the paper. That is a fascinating symmetry. In attributing a natural state to the oral mind, I could argue that it followed that the influence of typography on mind would technologize, and thereby foul, the natural mind. The main problem in the paper was the assumption of media determinism, and the resulting central weakness was thus a failure to understand that a technical accomplishment of tremendous complexity was the First Nations' development of systems of abstraction and representation. Those systems require metaphoric symmetry in multiple referential domains, and consistently validate the adequacy of our referential systems by requiring validity checks based on local empirical observation.

The Silence Before Drowning in Alphabet Soup

In the second work, "The Silence Before Drowning in Alphabet Soup," I described the resonance between environment apprehended by an oral mind and the comparative dissonance of that same apprehension after mind had been alphabetized. Based on the hypothesis implicit in that discussion was the contention that the "unmediated" relationship was both an attainable and enviable practice for environmental education. Once more, our own Golden pre-literate Age was mourned. Instead of concentrating on determinism, in that paper I discussed the dangers inherent in the assumption of a primacy of legitimacy of literate knowing. Unselfconsciously I assumed an unremarked dualism of orality and literacy. The case was made against literacy as the first step in the habituation of mind to mediation, and I warned of the path literacy opened to artificiality and hyperreality.

I proposed an alternative method for environmental education, that of oral story, because of its necessary grounding and embeddedness in the local. There was a discussion of literacy's displacement of the local in shaping the foundations of understanding of the universal. Distraction from place is inherent in electronic media whose speed-of-light communication and behavioral concomitants were claimed to correspond to the bias of dislocation and removal from place.

The substantive point was in the discussion of the validity, authority, and legitimacy of physical nature *as knowledge*, and the way in which Native ethos honors the intelligence of nature's autopoietic organization through oral storytelling. Silence was held out as a necessary precondition for realizing resonance with nature, and for subsequent veneration and communion with the physical presence in nature. Environmental education conducted exclusively in terms of images and words was critiqued as deficient in the principle of resonance with local nature, and I indicted current environmental education for its potential to displace the primacy of the authority, legitimacy, and validity of the physical environment.

Another Look At the Issues:
Problems In Current Environmental Education Practice

In two works I attempted to describe the current range of topics in environmental education, the internal coherence of the field with reference to that range of topics, and the place that First Nations thought has been given in the field.

A Profile Of Recent Published Work About Environmental Education

Because in other discussions I characterize current environmental education practice as deficient in various ways, it seemed reasonable to complete some kind of formal assessment of it. It is a broad and complex field, so any kind of short statement about it cannot be comprehensively descriptive. I chose to document the range of topics in the literature in the field, not to discuss the incidence of particular topics nor the legitimacy of any of them, but to provide some kind of indication of relative focus.

I think that Chapter IV demonstrates that a predominant preconception in the field is one of dualism—that is, that humans and nature are to be considered to be conceptually distinct. Assumptions behind much of contemporary environmental education are evidenced in the way the topics are dealt with in the field. I believe that those assumptions are (a) that environmental education is based on the creation and organization of information about the environment and about human development; (b) that we segment that information for presentation in education, based on our knowledge of human developmental sequences; (c) that the ethic of environmental education is self-evident, that information about environmental degradation and pollution demonstrates that pollution is a bad thing; and (d) that the goal of environmental education is behavioral change.

I suggest that "meaning" in environmental education must be more than cognitive, conceptual meaning if there is to be any behavioural change.

Following the description of the range of current themes and paradigms in environmental education, the next step was to suggest a rationale for the reorientation of environmental education, and a model that suggests itself is the one provided by Native North American traditions.

Alienation and Integration: Environmental Education and American First Nations

This work is an attempt to illustrate how Native traditions have been used before in environmental education and in conservation movements. I make the points that each of the indigenous American traditions are culture specific, and should not be appealed to on a piece-meal, ad hoc, or generalizing basis, but that what we have to learn from North American Indian traditions is something that, if we are to understand it, must come to us from those who have the authority, within the cultures, to represent it to us. I illustrate the issue of authority with reference to very early efforts in outdoor education and conservation education which romanticized an appropriated "Indian" lore. Without authoritative teaching, First Nations knowledge is misappropriated, and the effect is to alienate the knowledge and the environmental education movement from First Nations communities. I believe that that state of affairs has been characteristic of environmental education, despite consistent appeal during the last 100 years to "Indian" knowledge and practice.

Continuing the illustration, I refer to evidence that First Nations people are coming to be recognized, not just for the contribution they can make to environmental education, but for the way that understanding a First Nations ethos might reinform our practice in the field.

Two Works About Storytelling

In the two final works I explore aspects of First Nations storytelling to see what that tradition teaches us about possible new directions in environmental education.

Understanding that self is part of nature, not separate from it, brings a sense of responsibility. The understanding itself however can be negated by the practice of a curriculum that uses a symbol system that is without grounding and reference in the experience of local nature. Curriculum founded on the assumption of dualism invites an acting *on* nature, rather than an acting *in* nature. I look to storytelling as a curricular practice that might provide an organizational logic for information about the environment, but which has us as humans acting in, not on, environments. An ethics-based storytelling should provide the organizational logic for the way we approach educational practice, relative to human cognitive, emotional, and physical growth and development. I felt that the development and embellishment of feelings toward the environment can nurture and enhance appreciation of and responsibility toward the cosmos; but I believe that that begins with a renewal of sensitive relationship with the local. Storytelling permits the possibility of erecting a symbol system which is able to preserve the authority and legitimacy of place because of its requirement for validity across a number of domains including the physical, the emotional, the intellectual or mental. Being referential to local and specific place is therefore a fundamental element of good storytelling for environmental education.

Wilderness and Storytelling

Cree elder Raven Mackinaw implied that dualism is not the appropriate frame of reference in environmental education, when he said that "wilderness and storytelling are the same thing." A beginning point for discussing at least one elder's contribution to environmental education would be to try to understand why he equated those two things. I explored the implications of his statement in Chapter VI.

There was a time in the history of the development of Western thought when his statement would have been more readily understood. I took Raven Mackinaw to mean first that both wilderness and storytelling are necessarily local: though both are abstractions, they refer immediately not just to place but to specific places. I knew that in many Native traditions there was a requirement for stories to be localized with respect to specific places, and for the empirical validity of the stories to be checked against place. I believe that that is a view of nature that is consistent with pre-Socratic Western philosophy. Thus, in the paper on this topic, I looked at the development of the Western concept of wilderness, and how it arose through a definition of a place as "wild," because of the nature of human agency in a place: the wilderness was a place defined by either a lack of human agency or by the way a particular kind of human agency allowed for the primacy of natural process over human process in that place. Along with that idea came the idea that humans were separate from nature, and in that separateness there was a hierarchy in which Western Europeans were the most "advanced" peoples. Both land and peoples could be ranked: peoples were at their best as they were civilized, and land was at its best as it was cultivated or used. Those unwilling or unable to participate in the domination of land were alleged to be inferior, no matter that they showed a sensitive and vast knowledge of the land. It seemed to me that the concept of wilderness thus arose along with a dualism of the human and the natural, and along with a conception of hierarchies of human groups.

Raven Mackinaw does not admit to such dualism. His point is not that nature is integrated and that its components are interconnected; his point is that the components of nature are ascribed status as components only because we segment them in our descriptions of our surroundings. Raven wants us to see nature as a unity, but he wants us to recognize that our separation from nature is as much a descriptive conceit as is the retention of our segmentation of nature into components. (We must segment in description; his charge is that we fail to recognize the essential unity of what we segment.)

Some perspective on how to interpret Saulteaux and Cree discourse was provided by the sensitive analyses of examples of that discourse by Linda Akan and Walter Lightning. The work of Keith Basso and Julie Cruikshank in two very distant Athapaskan groups confirmed the sensitivity to place of the storytelling tradition, provided a description for the way that stories refer to place, and demonstrated how the traditions allow for "reading the land." I argue that it is clear that a kind of truth is evident in such reading of the land, and that we who are involved in environmental education should take account of that truth to inform an ethic of participation in place.

Storytelling For Environmental Education

Three quite different discussions lead to similar conclusions when the precepts in those discussions are applied to environmental education. The theoretical discourse on environmental education and pedagogy, relative to appropriate sources and symbol systems, is a limited but exciting discussion. Kieran Egan (1987) makes a foundational and substantial claim regarding an inherent ethos of environmental conservation as a structural feature of oral tradition. Egan's claim is consistent with Oliver's and Gershman's (1989) call for symbol systems and pedagogical processes that will repair the fragmentation of meaning which is systemic in the curricula of modernism. Mander (1991) describes the perils of a technological knowing when that knowing is ungrounded in either the experience of land or familiarity with Native traditions.

Egan has a substantial answer for the central question of symbolic symmetry with place laid out by Oliver and Gershman. His explanation, however, is elaborated upon a framework of recapitulation, an idea that developmental stages, as children grow, recapitulates a social history of the evolution of human cultures. Unfortunately, suggesting that children in literate cultures approximate—in any way—people in "pre-literate" or "oral" cultures can be seen, I think, as an inappropriate motivation for the inclusion of Native North American traditions in environmental education. It is, in any event, a notion that anthropology threw into a cocked hat a long time ago. Against the background of an environmental literature which I have characterized as racist, romanticizing, and marginalizing of Native environmental traditions, it is even less appropriate a motivation for including Native American traditions of storytelling in environmental education.

That is an unfortunate thing, because Egan's discussion of the importance of story to ideas about nature provides storytellers and storytelling alike a vital place in environmental education. This recognition of the contributions by Native story as meditation(s) on what it means to be in Turtle Island for tens of thousands of years comes at the same time that we all recognize that the environment needs all the help it can get. The Native tradition of storytelling is an example of the principles First Nations peoples have to offer all of us in settler culture, so that we are able to realign our own mythopoeic traditions to fit the land on which we now dwell.

Without the baggage of that recapitulationist explanation, Egan's theory works well as a contribution to an equitable, intercultural partnership in building a reoriented and constructive postmodern environmental education that is knowledgeable about where it is going and from whence it came.

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CHAPTER II. THE NATURE OF ORALITY AND THE ORALITY OF NATURE[1]

While you and I have lips and voices which
are for kissing and to sing with
who cares if some one-eyed son of a bitch
invents an instrument to measure Spring with?
— e.e. cummings[2]

Communications theorists Harold Innis, Marshall McLuhan, and Walter Ong assume that media creates consciousness in its own image and suggest that literate minds become sequential, logical, and rational by reading the printed word. They believe oral minds are created by speech and they characterize them as "empathetic and sympathetic rather than objective; as using language that stays close to life; as believing that everything is connected to everything else," (Ong 1982:31, 77). Environmentalists, describing nature's ways, assign qualities virtually identical to those which communications theorists use in describing orality. If nature, like print or orality, is seen as media, then oral minds, living and learning amidst nature, were shaped primarily by nature and secondarily by speech. My talk will discuss this possibility.

Walter Ong's (1982) classic *Orality and Literacy* is being widely read at a time when environmental concern and fear about falling literacy standards compete for first place among worriers. I am concerned about why Ong wrote an entire book about aboriginal and preliterate thought and did not discuss the relationship of nature to oral peoples. The work of a highly literate scholar is bereft of simple realities. The first reality is that the mouth is foremost an organ for eating. The second is that aboriginal peoples have a sensitive relationship with nature. This relationship builds an epistemology which reveres organic truths far above any abstract thought unconnected to nature. Simply put, to aboriginal people ideas are revealed by nature which also constitutes their god and their reality. That Ong can write a book which does not even once discuss the influence of nature on aboriginal thought style brings to light some fundamental biases of the modern, literate mind. My vehement disagreement with Ong lies in the fact that he attributes the existence of the aboriginal mind to conversation, while ignoring the relationship of the aboriginal mind with nature. The silence in which aboriginal people hunted and worshipped is neglected and with it the very idea that by understanding the forest the aboriginal understood the universe. Also notable by its absence is attention to aboriginal participatory consciousness which revealed nature as a living organism well before British physicist and ecologist James Lovelock (1988) advanced the selfsame proposition.

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[2] In Baez (1990:1).

Ong has devised a grid of adjectives he calls "psychodynamics" which describe the oral mind. Indians, who themselves owned this "oral mind" fundamentally believed themselves to "be nature." I suggest that the characteristics Ong claims apply to oral minds can as easily apply to nature. But Ong does not believe that these truths reside within nature and are revealed through participatory consciousness, which is to say, a consciousness which becomes participant in another's being—being one with a tree, thinking like an elk, etc. The aboriginal believes nature has an epistemology quite apart from language but accessible to participating consciousness. Participating consciousness is not contained within spoken language but rather within the *umwelten* of all living things. The aboriginal mind believes that all things have feelings and that feelings are the currency of communication in the living earth. They do not have the anthropocentric and inhospitable view that polar bears and grasshoppers need speak fluent humanese to be understood.

In the realm of nature it is relationship which defines community and feelings which define communication. Ong also neglects to mention that within the aboriginal concept of reality there is nothing which does not have relationship, and thereby feelings, which are then communicated and shared by everything else. Pantheist aboriginals can easily experience a rock, a bush, or a star. The difficulty comes when the pantheist must make the rock, star and bush the object of a detached and objective consciousness. For when the bush becomes an aspect of foreground rather than background and therefore becomes externalized from the cosmic or participatory consciousness, the bush is deprived of its every quality of feeling and inevitably, of relationship. Literate, scientific insistence on nature as something dead and aboriginal insistence that nature is alive as the truth of god revealed is, I believe, the heart of the reason why Ong thought nature unworthy of mention. The truly literate mind hardened by the Platonic belief that ideas exist in governing roles above nature has no use for nature except as a demonstration of abstract ideas—none of which, by the way, can be eaten.

Ong's grid of oral characteristics has not yet faced scrutiny by aboriginal peoples. However, as a positivist who hopes to lead oral peoples into the enlightened world of abstract thought and "literacy," Ong has denied the genius of oral peoples for incorporating into speech the epistemology of nature. As it is a caveat of literate positivism that there is no epistemology in nature, instead only in the realm of abstract ideas; and as it is the position of aboriginal peoples and most environmentalists that nature holds the only genuine epistemology (see, e.g., Maturana and Varela, 1987), I will discuss Ong's psychodynamics of the oral mind in light of this disagreement.

The primary relationship of aboriginal peoples with their environment is not verbal. Words do not represent nature, rather they represent thoughts which are no more than words about nature. But nature represents ideas. There is no word for what the world is in its natural, non-verbal state. For the question "What is it?" is really asking, "In what class is it?" Classification is a human invention and nature does not exist in classified form. Alan Watts suggests that the only way to know what nature is to eschew language based thought and, "observe it (nature) with a silent mind," (1958:34). By silent mind, or Zen "no-mind," Watts means "thought itself must be silent to think about anything other than itself," (p. 35). The aboriginal mind, unlike the literate mind, assumes words do not represent nature but rather that language creates things. Things, of course are unknown in the aboriginal pantheon because (a) a thing can only exist if it does not have the characteristics of life which pantheists accord to every aspect of nature; and (b) to have feeling is to have reality, and language only has feeling when it is spoken by living beings. Written language is dead because it is a thing, a technology without feeling. To the aboriginal a book exists outside of nature as a thing and as such may be both poisonous and contradictory to the tenets of pantheism. While books may be fun they have no meaning because they have no feeling. I don't mean that the book and writing are unimportant, simply that the virtual lifelike qualities we accord the text can not happen in aboriginal cultures. If we want to know about the cosmos we are told to read a book, while the aboriginal is told to go for a walk.

Excessive verbal communication is to Watts and to the aboriginal community the "characteristic disease of the West," (Watts 1958:35). For this reason, nature can no longer be directly experienced in the mental silence called "no-thought" where it becomes known through relationships of feeling. The ability to experience a tree arises from an integration of the silent mind and body with nature rather than through subvocal speech or thinking. This, of course, sounds like lunacy to the literate mind, which by the way sacrifices 150 acres of forest for every Sunday run of the *New York Times*.

Admittedly, Ong is aware of the literate bias without following through on the implications this bias has for aboriginal epistemologies. He says

> Our complacency in thinking of words as signs is due to the tendency, perhaps incipient in oral cultures but clearly marked in chirographic cultures and far more in typographic and electronic cultures, to reduce all sensation and indeed all human experience to visual analogues. (1958:35)

One of the most telling reasons for wanting to know nature symbolically is revealed in a National Defence Council finding that "modern Americans spend(ing) ninety five per cent of their lives indoors," (Cohen 1988:17). Modern indoors people dwell in linguistically saturated environments flanked by speech communication from radio and television and rarely or never directly participate with nature. In other words, indoor people regard nature as a verbal and pictorial reality while oral, outdoors people regard nature as "grandly illiterate." Aboriginal minds perceive nature as a pattern of discernible ideas whose primary reality is participatory and are reluctant to accept speech as solely reflective of this reality. The modern environmentalist who enters the forest armed with field guides and maps approaches nature with a literate bias simply because technical, urban, literate civilization does not prepare him/her to know where or why moss grows on certain sides of rocks in streams and what the presence of spotted tree toads on alder trees reveals about coming autumn. Nature and perception themselves become languagized. Literate people can hardly experience a tree if the only reality nature represents is verbal. This is why we revere botanists, because they know how to name nature and this makes nature conceptual and thereby easy to conceive. At the same time we dismiss as mad the psychic who puts her ear to the ground and feels nature's pain.

If Marshall McLuhan was right when he said, "Media creates consciousness in its own image," then the oral mind in sensitive relationship with nature will demonstrate certain qualities of nature. Therefore it stands to reason that just as literate people reason logically because they read, aboriginal people should reason ecologically because they communicate with nature or, put another way, the aboriginal epistemology should resemble nature's epistemology. Here I use Neil Postman's concept of epistemology when he writes, "I want to show that definitions of truth are derived, at least in part, from the character of the media of communication through which information is conveyed," (1985:17). To an aboriginal mind all of nature reveals or communicates information in the form of relationship and feeling. If the epistemologies of nature and oral minds are roughly equivalent we will be compelled to accord nature the primary role in shaping the aboriginal mind. And, by implication, indict our own lack of understanding nature on its own terms of relationship and feeling. For as Ong suggests we rely on mediated symbols about nature which have their own epistemology.

Let us now examine the qualities Ong assigns to oral peoples.

The quality of being "additive rather than subordinative," Ong suggests, characterizes the oral mind. He believes a copious number of "ands" when chained together characterizes oral narratives while written discourse would instead feature reasoned subordinatives like "thus," "while," and so forth. Here Ong reveals the hierarchy implicit in top-down reasoning. After all, subordination must of necessity subordinate something to something else and as Judeo-Christian cosmology approaches intelligence as a descending order from God on down, it is only appropriate to suggest that grammar capitalizes on cosmology. The subordination ethos is big in Western thought but in the writing of John Muir we see why chaining "ands" is more representative of nature's organization. He says of trying to write about nature "Can't get a reasonably likely picture off my hands. Everything is so inseparably united. As soon as one begins to describe a flower or a tree or a storm or an Indian or a chipmunk. Up jumps the whole heaven and earth and God himself," (Cohen 1988:79). The keystone of environmental thought is that everything is connected to everything else in nature. Muir's inability to translate the epistemology of nature's interconnections into literate, hierarchical, and subordinate prose suggests his conceptualization of nature was of an infinitely connected reality. If everything is connected to everything else then "and-chaining" is far more expressive of nature's epistemology than subordination. To the aboriginal mind there was no hierarchy to subordinate to since everything was as important as everything else. For the oral mind putting nature into writing was of great difficulty because the act of writing required thinking in the ideology of a grammar where subordination was implicit. Also or difficulty was subordinating reality to symbols, since at least within phonetic alphabetic writing, nature as a sensual relationship can not exist.

For nature to exist conceptually it must be made visible by the act of making it separate. Nature exists therefore only because we have excised it from the context of our lives. To illustrate this difficult concept we need merely look at the way we talk of our leg. We refer to our leg not as an "it" but as a "me." The aboriginal relationship to nature is likewise a relationship with "me". Until the technology of writing separates the psyche from the forest we cannot have an "it". The oral "and" more accurately reflects the equality among creatures in the ecosystem. Those who experience nature primarily through silent participating consciousness are not reluctant to talk to the animals, rocks, and trees because to do so confirms their existence and belonging within cosmic consciousness. To describe nature in a way which alters the dynamic equality of existence and makes nature discernible as a separate thing or an object of discussion means one must first accept oneself outside of participatory or cosmic consciousness. To the aboriginal mind this means one is no longer part of reality. This is more severe than death for in death the spirit still lives. Talking about nature as an "it" is more than sacrilege, it means not even being of this earth. The very act of making nature discernible is indicative of a transformation in the perception of nature in the human context or background. By placing nature in the foreground as an object of consciousness the oral mind loses its relationship to nature. Nature is no longer part of what defines our existence and which reveals the phenomena of daily life; as zoologist Neil Evernden notes, "nature is transformed from a definer and revealer to a thing defined and revealed," (1985:88). Nature, when set apart, has become a forensics lab corpse on whom the scalpels of purposive thought operate.

In narrating the complex interrelations which form nature"s epistemology we can not talk about domination and therefore subordination. These are inexcusable refinements to a grammar where "and" is the only concept which holistically represents nature's relations.

Ong's next point is that oral peoples are "aggregative rather than analytic." He says,

> Once a formulary expression has crystallized, it had best be kept intact. Without a writing system, breaking up thought—that is analysis—is a high risk procedure. As Levi-Strauss has well put it in a summary statement "the savage (i.e. oral) mind totalizes". (1982:39)

The notion of totalizing is illustrated by Muir's problem in trying to make ecologic, or the notion that everything is connected to everything else, into written logic. For Muir written logic becomes overwhelmed by huge and complex recognition of listings of interrelationships, or "ands". Muir's stream of consciousness is aware of the multidimensional and dynamic events and relationships which produce the present for which he is trying to account. Since no feeling, relationship, or entity does not count in this moment one must in fairness to all creation account for all things; in short, one must totalize. Biologist Barry Lopez describes the totality in what Ong calls the "savage" mind:

> Hunting in my experience — and by hunting I simply mean being out on the land- is a state of mind. All of one's faculties are brought to bear in an effort to become fully incorporated in the landscape. It is more than listening. ... It is more than analysis of what one senses. The hunt means to have the land around you like clothing. To engage in a wordless dialogue with it, one so absorbing you cease to talk. ... It means to release yourself from rational images of what something "means" and to be concerned only that it "is." And then to realize that things exist only insofar as they can be related to other things. These relationships ... become patterns. The patterns are always in motion. ... The mind we know in dreaming, a non rational, non-linear comprehension of events in which slips in time and space are normal is, I believe, the conscious working mind of an aboriginal hunter. (Lopez 1988:179)

Aboriginal consciousness of totality is totality of consciousness and the only way to account for everything without resorting either to madness, short-circuiting the brain, or modern French philosophy is to look at what "is" rather than at "why" and "how". In other words, aboriginal consciousness *is* what "is". Analysis, as Ong (1982:19) puts it, is not only inconsequential to the totalizing mind, wherein multi-dimensional aspects of being are revealed, but prevents knowing what "is" by the very epistemology which favors "how" and "why". "How" and "why" are language fixated questions ultimately answerable only within a paradigm of ultimate causation. Sensitivity to totality is cosmology and like environmentalist Donald Oliver I believe, "cosmologies are inextricably tied to deep images and metaphors which influence not only how we describe the world with language but even what we actually apprehend, perceive, and thus bring to conscious expression," (Oliver and Gershman 1989:155). I go beyond even Whorf's position that the Hopi view of macroscopic nature as dynamic states of being can be reflected through language which allows for faithful reflection of perception. I suggest Whorf (in Oliver and Gershman 1989:88) does not go far enough and that aboriginal consciousness experiences a totality on the prelinguistic level of intersections among electronic particles that participate in the dynamic states of "being" which characterize the physical world. Too, I believe they comprehend this in the same process by which other humans have come to apprehend these states of being, as demonstrated by Owen Barfield (in Oliver and Gershman 1989:88) who refers to the experiences of preliterate peoples who actually seem to participate in this domain of micro-reality. Barfield's hesitation at *seems* being precipitated by a fear born of scientific training I have never had. My purchase on this claim being an adolescence spent trying to rid my mind of scientific positivism under the tutelage of village elders on the Parry Island Ojibway reserve in Canada.

Ong's further suggestion that oral people are "aggregative in description" (1982:38) stems from the pointlessness of applying logic and linear analysis to a multidimensional reality whose vastness spans both the atomic and atmospheric realms. Aboriginal sensitivity is so acute that Ong's assessment can be more properly understood as an indictment against the effect of logic on preventing our capacity for knowing nature.

Skipping ahead to his characterization of oral peoples being "conservative or traditionalist" it is especially worth noting that for the aboriginal mind, knowledge comes from the earth and therefore is limited by the organic. Thus varying geographies change thinking and we can not assume the same mental outlook about matters pertinent to our existence in a lush mountain canyon with a wilderness waterfall tumbling at our feet, as we might on the arctic prairie, the desert, the open sea, and especially in a library. As distanced as we are from nature we take vacations and feel exhilarated when new geographies change and replenish our spirits. Unlike aboriginal people we do not account for these geographies as symbols of the spirit because we articulate our spirit in words. The literate mind out of relationship with nature does not comprehend nature as a symbol of the spirit, yet the oral mind interacting with the land creates a symbiotic relationship revealing a rich and elaborate meaning system. The risk we take is in finding our final authority in metaphors or visual techniques such as contrast, remembrance, analogy in painting etc. rather than in the land. There is considerable comfort in knowing nature through books and microscopes to people who are incessantly symbolic, cognitive, and abstract. One never has to fall off logs, nearly drown, nor climb cliffs to commune with the sky or confront a larger reality unknowable through words.

Oral minds inquire into the intricacies of landscape to provoke thoughts about their interior landscape because the land urges the oral mind to understand itself. The essence of the Earth is not singularly material, it is also emotional and because Earth is illiterate, these feelings and sensations are its information. The literate mind screens out this "information" because staying at home means never having to develop a sensitive, contemplative, and sensual relationship with the living earth. For billions of years, feelings and relationships, not symbols and images, have coordinated the global life system's growth, within which humanity evolved. The traditions represented by oral people are those traditions which perpetuate earth and are virtually lost to literate, scientific minds. If within these traditions there is an infinite plane of being it is because language (especially written language) is blind. Nature shifts the locus of creativity from the human intellect to the enveloping world itself. The creation of meaning, value, and purpose no longer hovers inside the human physiology, for it already abounds in the surrounding landscape wherein it is more accessible to the sensorium than to our visually dominated epistemology. It is therefore no wonder that most literate people have stayed out of the forest for they have been able to make little sense of it. This, of course, makes the forest that much easier to cut down and to make sense of its products through building or agriculture, for then it has meaning. Our meaning rather than nature's meaning.

Land reveals its meaning to the participatory consciousness of the Australian aboriginal mind and is articulated in chants and singing. Such songs reveal even to distant tribespeople the land these songs articulate. Bruce Chatwin documented aboriginal land meaning when he surmised of these people, "(they) could not believe the country existed until they could see and sing it ... so the land ... must be sung...only then can it be said to exist," (1987:14). Assuming the ideas in nature are made real in feelings and these feelings are as real as the land, it would only make sense to participate with nature if one felt like real conversation.

The traditions Ong suggests characterize oral minds represent a cannon wherein participation in nature is revered because it is real while abstraction and definition are shunned because of their artificiality. After all, one is compelled to participate with nature if one wants to eat and can not discover nature's lessons sitting around talking about them. Lopez summarizes Eskimo hunters discussing hunting,

> One can only speculate about how animals organize land into meaningful expanses for themselves. The worlds they perceive, their *umwelten*, are all different. Discovery of an animals *umwelt* and its elucidation require great patience and experimental ingenuity, a free exchange of information about different observations, hours of direct observation, and, and here I stress, a reluctance to summarize the animal. (1986:240)

Summarizing an animal means showing disrespect. Furthermore, boasting an overconfident rhetoric debilitates ones consciousness by habituating the mind to verbal rather than Zen responses. When meeting six foot polar bears one should be prepared to speak their language.

Ong (1982:43) goes on to suggest that closeness to the human lifeworld and antagonistically toned oral performances further define oral peoples. This seems readily explainable by aboriginal peoples closeness to nature. Talking wolverines, sly foxes, and beavers which mythologically originate the universe are close to the human lifeworld precisely because aboriginal people have no trouble believing they speak the same cosmic tongue as the wolverine. Only by Ong's own unexamined separation from nature can he and we consider the human lifeworld as separate and thereby central to the operation of the world. Ong disrobes oral cultures as "extraordinarily antagonistic in their verbal performance and indeed in their life-style" and "By keeping knowledge embedded in the human lifeworld, orality situates knowledge within a context of struggle," (1982:43). Characterizing oral people as "focused on exterior crises", Ong completely neglects to realize oral peoples hunt and their culture reflects the difficulties of nature because they work full time on the food chain. Besides, the focus on "exteriority" within a story which "stays close to the human lifeworld" only confirms nature as an articulation of self.

Ong's description of oral peoples as "empathetic and participatory rather than objectively distanced" (1982:45) from what they describe can be explained by their cosmology which did not separate the knower from the known; which is the central requirement of objectivity. For participatory consciousness no separation was possible. Truth was inseparable from its telling and if nature were somehow rendered objective the storyteller would be condemned to an epistemology in which nature was "it" rather than "me". Oral minds, like those to whom Socrates appealed for understanding "a simple truth apart from rhetoric", can not grasp the representation of nature without humans and vice versa. For aboriginals, being objectively distanced from nature is the equivalent of being objectively distanced from your leg.

"Homeostatic qualities" which Ong (1982:49) describes among oral peoples culturally echoes the equilibrium of nature, nature's balance. The primal mind encompassing rather than abstracting its situation is concentrating completely on the dynamic state of things coming into being, as Whorf noted about the Hopi feeling for nature. If aboriginal consciousness is the convergence of nature's feelings, the equilibrium of nature is apparent as a shared contribution from landscape, sky, animals, etc. Consciousness means you are paying attention to the "is". Modern interest in nature is in some part a fixation with a visual obsession which displaces other sensory data. A visual, aesthetic concentration transforms nature into scenery. In other words, what is nature is mind and what is mind is nature...the land is your mind, the mind is the land. Homeostasis is found in nature's balance as well as the sensorium.

Finally, Ong says oral cultures are "situational rather than abstract" (1982:49). Again he claims there is minimal abstraction because orality is close to the living human lifeworld. For minds in sensitive relationship to nature, abstraction consists of separating qualities from that which possesses these qualities. For example, mooseness belongs to the moose. As a way of knowing, abstraction or "how" and "why", stands in opposition to aboriginal "being" or is". Alan Watts explains the poisonous effect of abstraction on the silent mind's understanding of nature, "the natural world therefore reveals its content, its fullness of wonder, when respect hinders us from investigating it in such a way as to shatter it to abstraction," (1958:52). Watts describes Zen situational thinking between a fishing heron, a pool of water, and a fish, "Kuan, (seeing) is then the simplicity to observe silently, openly, and without seeking any particular result. It signifies a mode of observation in which there is no duality or seer and seen: there is simply the seeing. Watching thus, the heron is all pool," (p. 74).

To be part of nature requires thinking like nature and in nature every idea has an organic reality, there is no abstraction. To the truly literate and abstract no landscape interferes with the implicit belief that one's mind is one's own, that it may choose its place in the order of things. The aboriginal mind is in itself a warning against thought that is theoretical or speculative and in its greater context warns us against disobeying the earth. The devil, after all, was the first exponent of abstraction and it is abstraction which permits self righteous correction of oral thought in the name of the superiority of abstract and literate knowing. Oral cultures to whom the Earth is epistemology can offer lessons which may well prove to be the only enduring salvation to the modern environment crisis.

In conclusion, if we accept that culture grows in information environments we must accept nature as the information environment where the oral mind developed. Nature's epistemology is revealed in participatory consciousness and not by reflective, which is to say, mediated consciousness. Aboriginal peoples who are by definition in sensitive relationship to nature recognize the dangers of mediated consciousness and conduct their discussions in full recognition of the potential in language for hubris. As the Eskimo said to the missionary, "We do not believe, we fear," (Carpenter 1973:197). Speech, when undertaken, displays qualities of the mind which in turn display qualities of nature.

The oral mind is what it knows. I have no disagreement with what Ong attributes to the oral mind by way of psychodynamics. My problem is that he assumes these qualities arise from interaction with conversation rather than nature. Ong expects the oral mind to behave like spoken prose since the literate mind behaves like written prose. This queers cultural evolution by making language rather than nature the central shaping influence. The modern mind is fundamentally literate or computer literate or television-minded fundamentally because modern people no longer live in sensitive relationship with nature. We are the way we are because our information environments determine our consciousness. The point I have been trying to make in this essay is not that Ong is wrong about how the oral mind thinks but rather that he mistakenly attributes this thought style to orality. By not examining the role of nature in this thought style he makes orality rather than nature the origin of human culture.

This, of course, begs the question of why some oral minds embraced writing while others have not, but that is another question.

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CHAPTER III. THE SILENCE BEFORE DROWNING IN ALPHABET SOUP[3]

Introduction

The comparison in this discussion is between cosmologies and contexts, not between groups of people. The argument is not about abstracted cosmologies and idealized cultural contexts, though, because the cosmologies affect real people, and that is really what this article is about. It is not an absolutely cultural-determinist argument. To speak or write of a culture based on orality and another based on literacy does not define indigenous cultures as simply "oral" and settler culture as uniformly "literate," with consequent attribution of cognitive properties or patterns to members of either culture.

The attachment of "oral" and "literate" to a distinction between cultures is a shorthand reference to two related things, history and legitimacy. For hundreds of years, knowledge and ways of knowing in most of settler culture (and longer, for some sectors of it) have included alphabetized, literate media. For thousands of years there has been an oral tradition in indigenous cultures. That is history. There is also a history of attitude here. Literacy and orality are valued and legitimized differently, and the difference in how we have valued those is part of our joint history. Schools teach literacy. There is no question that literacy is a good thing. The issue is the consequence of assuming that literate definition has priority.

This article is written from the perspective of a fourth-generation Irish-Canadian, deeply influenced by Judaism. I grew up next to the Ojibway reserve of Parry Island, Ontario. Into my teens I was guided in knowing the bush by an elder Ojibway woman and a grandfather who was a trapper. My father ran the supply store servicing the area's hunters and fishermen, and my mother taught me to read and told the Irish stories that had survived our immigration. This article is written from that perspective and from the perspectives provided by postgraduate training in the academic traditions of folklore and mythology, education (reading and language), and communication (media studies).

The Silence Before Drowning

Writing about oral cultures first requires accepting the irony of substituting the map for the territory. Employing the alphabet to describe cultures that do not use the alphabet is the requirement of this article. Writing about the cognitive complexities of oral cultures glosses over and ignores what the alphabet on the page cannot communicate. Writing is about seeing and believing in symbols that are substitutes for sensuous reality. The page, decorated with permutations of the alphabet, cannot represent smell, taste, touch, space, the teachings of the six directions, and earth. Most importantly, the alphabet is incapable of representing silence.

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A book, in other words, always has something to communicate. Even blank books beg for the inscription of words or pictorial representations. To read is in essence the entry point into an exclusively symbolic reality at the cost of the reality it represents. To get a divinity degree, a person reads theology. Having a divinity degree is more about mastering the language that describes divinity and less about knowing the divine. One of the names for God in the Judeo-Christian tradition is The Word. That Word was spoken for a long time before it was written down. In the history of that tradition, God speaks and can be heard, but is invisible except as symbolized in text. In somewhat the same way, orality is not easily given to literate description. Orality is made physically visible only through literate description and in so doing, removing "the ear from the page" (to borrow a phrase from Illich & Saunders [1988]).

Fundamental to literacy is the alphabet. Deciding to subject reality to representation in 26 letters reflects a decision that reality can be represented in 26 letters. Schooling, in the context of that decision, cultivates the ability to think in sentences, and to represent sentences structurally as grammar, the formal expression of which reflects this alphabetization of thought.

Orality, in its purest sense, is not about thinking as sentences and alphabets dictate. Schools ask for thought to resemble sentences rather than for sentences to resemble thought. In education, sentences, and therefore literacy, are techniques from which thought is assumed to derive and subscribe. In a literate culture, cognition and literacy are conceived of as functions of each other.

There is a historical and ontological primacy to orality as a concomitant of cognition. If orality reflects how a mind in fact behaves, it is vital to recognize the veneration in which silence is esteemed in oral cultures. Keeping in mind that the alphabet records only sounds, literate people regard silence as time unrepresentable in print or writing, and as an absence of meaningful sound. Writers, unlike storytellers, do not use silence because the structure of print will not allow silence. Nor can time be alphabetically represented without description of its actualization. However, not making sounds does not imply absence of thought. Silently thinking like a moose, or with a moose, means having an identity with the moose—it is a nonsemantic reference—and the spell of being in mooseness is broken upon thinking in alphabetic language. Unfortunately, silence in education is conceived of primarily as the absence of words, rather than as a belonging to realms of stillness and the unsayable. In the realm of the unsayable and in the silence of the human voice, oral culture still hears, smells, touches, and tastes the wind, waves, and rain. Thought is not constrained to be lexically referential. Self-reflective conceptual thought, in silence and unmediated by symbolic representation, is constrained to refer to the physical self in physical context, the context of the Earth; the constraint is that no matter how abstract the flight, or how many levels of metaphor or abstraction, the physical self in physical context is the point of return.

Self-reflective conceptual thought that is mediated by alphabetized thought can displace the physical self, and the reflexivity can remove focus from the physical self to a conceptualized, symbolized self. With the physical self objectified and removed from this discourse of one, "self"-reflection can lead to a kind of conceptual looping, with no anchor to the world. One thought inevitably leads to another as surely as one literate sentence compulsively leads to another. This need not be considered bad but is surely a psychic attribute of symbolic environments.

Take, for example, contemporary people arising from sleep and turning on the television, so flickers of technicoloured light fill the room while accompanying background noise creates an ambient and habitual atmosphere of chronic hyperstimulation in the home. This hyperstimulation becomes subsequently manifested in things like Walkmans, vision processed through psychedelic tinted sunglasses, and neon clothing. Together they create a portable and prophylactic aural and visual hyperstimulation that cancels unmediated reality by emulating the electronic environment. This preference for replicating hyperreality is, in part, coming to terms with urban reality itself as a hyper-reality. Which is to say, that the experience of reality as a mediated experience is preferential to accepting the sensual experience of *experience* on its own terms. This is a roundabout way of saying that reality as a perceptual, sensual experience is preferred when it is boosted into a mediated and therefore conceptual experience. Why else would joggers listen to a Phil Collins tape, dress in neon yellow, and wear purple sunglasses, unless the experience of running was somehow enhanced by these accoutrements? Marshall McLuhan (1964) was right when he said that media creates consciousness in its own image.

Like literacy, there are aural and visual hyperrealized stimulations that are homogeneous and universal signals. Michael Jackson tapes are essentially the same no matter where in the world they are played. Similarly, the essence of Karl Marx's thought is understood by adherents in Cuba as thoroughly as in Albania. Point being, when thoughts derived from literature race through the mind, or when our ears are busied by musical distractions, and when this becomes the predominant experience, the immediate physical environment becomes displaced as primary. Earth no longer serves to centre us and to nurture our place within nature. Earth becomes taken for granted as the point of departure from which we blast off into orbits of distractions from the guiding forces of the Earth. We launch imbalanced and complex expeditions that prevent us from knowing the Earth and ourselves, because we would otherwise be compelled to listen to the Earth and know ourselves. Distraction breeds distraction.

If oral cultures are conceived to be composed of people who are primarily aware of their immediate physical environments, it is because their sensual acuity is highly developed, because of this requirement of oral culture: however many levels of symbolized representation we employ, unmediated physical experience of the environment is the point of return. Oral cultures recognize abstraction for what it is: abstraction. Oral people must be good listeners, seers, smellers, feelers, and tasters. Their experience of reality is acute because their senses work together harmoniously and equitably. They are not lost in mediation.

Aboriginal, and therefore primarily oral, attention to nature or sensual reality, has created complex and elaborate understandings of the elements of earth, sky, water, and living things. By putting nature in mind and mind in nature, aboriginal culture conceived of silence and the unsayable. It did what alphabetic culture could not. Through alphabetization, the experience of silence has meant silent reading and therefore looking at words rather than the experiencing of the things words describe with the five senses. Oral culture can be conceived of as the resistance against seeing the written representation of things as complete and genuinely conceived without using all the senses. Alphabetization is the acculturation and preference of conception over perception. So alphabetization is also the displacement of local knowledge through the force of universal curricula.

There is a difference between oral cultures and literate cultures in the way that the Infinite is conceived of. That difference is related to the way that microcosms are systematically contextualized within infinitely larger systems. Literate cultures standardized the idea of God (representable by the printed word; metaphorically, "The Word") and with this concept celebrated their monotheism. Literate cultures could not accept the idea that the Sacred was allied with and manifested in the natural environment, for that deconceptualized God for literate cultures, and alienated the infinite from the word. Movable type even removed the concept of God as picture, and standardized Him as printed word. The biblical God is a concept that can have currency worldwide because, like the alphabet, it is portable. However, many biblical proselytizers seem to insist that knowing religion is primarily knowing religious semantics. It would be inconceivable to them that a person can be taught about the Infinite and sacredness by the bush. Oral cultures, on the other hand, can recognize the way that the biblical God deals with creation, because of their knowledge of their ecosystem. They know—from sensed experience of the environment in microcosm—many properties of infinitely greater systems and domains.

From the specific meanings gained through understanding the bush, the oral mind created principles for recognizing infinity, the totality of all things in totality. This is immensely distinct, as Ivan Illich and Barry Saunders (1988) note, from literate knowing deriving "Infinite meanings without specific meanings" (p. 122). The understanding of microcosm as preliminary to under-standing macrocosm is a common sense transition and, while centring the knower, reminds him and her of the great wisdom of being centred. As Jo-ann Archibald (1990) notes in a recent article quoting Chief Luther Standing Bear of the Lakota Nation,

> The Lakota was a true naturalist—a lover of nature. He loved the earth and all things of the earth, the attachment growing with age. The old people came literally to love the soil and they sat or reclined on the ground with a feeling of being close to a mothering power.... For him, to sit or lie upon the ground is to be able to think more deeply and to feel more keenly; he can see more clearly into the mysteries of life and come closer in kinship to other lives about him. (p. 74)

To fathom the transition from one microcosm to macrocosm is to ponder awe and wonder; it is to be silent, tranquil, and reverential in knowing the sacred. The enormous centredness learned by the elder from lessons of the earth allows the elder to know when to talk, and further to know when to listen and when another person is ready for these lessons. Perhaps this is the reason oral cultures recognized the auspiciousness of silence, for silence was the space between stages of development that kept the stages from blurring together. Books and electronic media place all information within the scope of the reader, and require no elder to judge preparedness for the next step in spiritual development. Thinking about written religious education is all the more curious when one considers that the oldest writings of the Middle East are accountancy records (Gelb, 1952). It is no wonder God first entrusted his words to a worthy listener and wrote his own tablets.

When sacredness and the infinite were first graphically represented, they apparently were not initially conceived of digitally—in letters or numbers—but ideographically in pictographs. With the evolution of the alphabet, the sacred became digitally represented and was eventually formalized as text. For the Egyptian, whose hieroglyphic or ideographic concept of divinity was not digital but analogical, the holy of holies was the chamber in the depths of the Great Pyramid where complete silence prevailed. This room was the architectural equal of Zen no-mind, a place where the coursing of the blood could be heard and perhaps the coursing of the universe.

Silence may describe a kind of nonconceptual cognition. Many thinkers have tried to express that observation in words and it is a precept of several traditions. Allan Watts warned, "To hear anything other than itself the mind must learn to be quiet," (1958: 5). Perception may be similarly argued to be nonconceptual. Jamake Highwater (1981), in his influential *The Primal Mind: Vision and Reality in Indian America*, argues that perception is not limited by the senses, but rather that the entire body is an organ of perception independent of the literary domain. Similarly, bodily knowledge in Western culture is historically addressed in Morris Berman's (1989) *Coming To Our Senses: Body and Spirit in the Hidden History of the West*. The no-mind of Zen is the dismissal of alphabetic consciousness. Oral minds are not bridled by conceptual thought as thoroughly as minds that are exclusively dominated by books and the built environment because they admit to the legitimacy, both of the concept—the abstraction—and to the return to the sensual, physical experience. The conceptualized experience is not the "real" one. In other words, this is not to say that oral minds are not conceptual thinking minds, but rather that in learning the lessons of thinking as the forest thinks, the oral mind is not divisive nor abstractly self-reflexive like literate minds, which seem ever attempting to heap more commentary upon smaller aspects of symbolic reality.

For example, books are written on books written about books and in our own lifetimes we can witness the information explosion caused by the computer which has doubled the amount of recorded knowledge every ten years. The forest, and the oral mind which lives within it, pay attention to where and what it is now—orality is sensual life and its recognition. Oral cultures are more likely to have reflection implosion rather than information explosion.

Literacy, on the other hand, is ideational and is always at least once removed from the experience of reality. Illich and Saunders (1988) seem to have described the tension between the "we" which describes the oral reflection implosion and the "I" of literate information explosion when they say

> The alphabetization of silence has brought about the new loneliness of the "I," and an analytic "we." *We* is now one line in a text brought into being by communication. Not the silence before words but the absence of messages in a chaos of noises." (p. 123)

I do not claim that the grandfathers who knew the land did not resort to abstract words or representations, but Edmund Carpenter (1972) described the osmosis between world and word knowledge thus, "Once they venture to tell of the outer world, geography gives way to cosmography" (p. 13). The abstractions of oral cultures are derived from knowing reality; there is not a chaos of noises in the bush, for each sound is a lesson of the earth. Literate abstractions are derived from knowing symbols about reality. The chaos of noises is the inability to find meaning in the cacophony of the technological roar in the built environment. Answering the eternal questions of who are we, where did we come from, and where are we going, is difficult in both oral and alphabetic cultures. However, finding the answers in libraries or cities can lead to mechanistic explanations. Science tells us that we are here because of a cosmic explosion and live on a rock that will be destroyed before long when the sun explodes. Capitalism and materialism advise us that in the meanwhile we should be comforted through producing and consuming goods. This explanation of our beginnings sustains hopeless and desperate behaviour because it is a poor metaphor, unable to communicate the wisdom of earth. Jo-ann Archibald (1990) offers a sustaining story drawn from Crowfoot's knowing the earth; he says, "From nowhere we came: into nowhere we go. What is life? It is the flash of the firefly in the night. It is the breath of the buffalo in the winter time. It is the little shadow that runs across the grass and loses itself in the sunset" (p. 74). Culture out of contact with the earth becomes a stranger to the comforting lessons of wisdom and mystery that inform everyone living in sensitive relationship to the earth.

Orality brings you face to face with your traditions while literacy encourages privatization of conception and substitutes verisimilitude of description in language as appropriate substitution for reality. Literacy implies not only that symbols can represent knowledge but that symbols *are knowledge*. This puts the onus on people to always make sounds in order to be considered wise; silence is unworthy. Yet in silence we ultimately hear the earth and ourselves, and confront the immensity of what cannot be said, what cannot be translated into sound. Sounds and words ask us to explore what we already know and rarely ask us to explore what we cannot and do not know except in terms of what can be said.

Alphabetized minds insist on speaking themselves. They work on the idea that human sounds are better and wiser than either the language of the spirit or silence. Alphabetized minds are not inclined to hold their tongues and pens and keyboards, and to say nothing. On the page, saying nothing means having nothing to say. Since alphabetic thought enshrines only the sounds we can make, alphabetized minds compulsively make these sounds. Alphabetized culture has virtually ceased, except in jest, in the story, and in the poem, to venerate the sounds of rolling thunder or the west winds of autumn; and when we do we rarely accord them a presence of wisdom in our writing and talk, for they are not human sounds. What if the world, as it well could, ceased to have anything but the sounds of alphabetized minds and machines communicating as books or tapes or televisions or computers?

It is alphabetized minds that do not see that every thing on the land is connected to every other thing, because sentences and books and even sight itself select and present things in isolation for examination. In oral cultures, hearing and smell, senses that are inclusive rather than selective, incorporate everything in their presence. Living in sensitive relationship with the land means oral cultures knew the land through all of their senses. Furthermore, there is little opportunity to mistake the map for the territory because oral cultures are surrounded by the things their words can and cannot symbolize. Overdependence on conceptually segmented sight as the sense most worthy for understanding the world isolates things and processes and becomes habitual in its repetitive and reinforced knowing of the world as a purely visual phenomenon. Alphabetized minds are mediated minds and prefer to write about the sunset, or photograph it, or interpret it in guitar riffs. These are preferred to experiencing the sunset on its own terms.

Alphabetized and mediated minds want to wring images and words from a sunset that is grandly illiterate. Ultimately these symbols come to assume greater importance than the sunset itself. One need only watch people in cars going to view sunsets to see how the image of the sunset occupies them more than the experience of the sunset. Once the sunset is on film it is transported into living rooms to be replayed as evidence that people were there. Mediated minds attempt to become closer to nature by spending more time in front of televisions witnessing on the screen what they originally experienced through the lens they used to experience the sunset in the first place.

Education conceived in terms of the words and images we can wring from these experiences asks us to busy ourselves always, and to displace silent and still experiencing of the earth. Alphabetized culture sees and hears itself experiencing the images and language about nature rather than experiencing nature itself; a sort of "this is me doing this" attitude is encouraged. Our meditations become the creation of images and records testifying that we were there and that we saw something. It is memory externalized. The great difficulty, of course, is that there is no elder teaching the story of the sunset. Videotapes are memory without mind and are at least for literate minds far sexier presentations than storytelling. Recording these experiences on film removes us from nature by making our presence there only a reference to the recorded event. It is not going too far to say that mediated minds conceive of their behaviour as images in reference not to the place where they are, but in reference to how they will be recorded. One need only watch the behaviour of tourists playing to the camera or rock climbers in neon Spandex conceiving of themselves as images, behaving as though they were movies or photographs of themselves doing something so spectacular that they deserve to be filmed. Photographic culture conceives of itself as a narcissistic spectacle, one step beyond the writer as conceptual observer and two steps beyond the oral mind, that does not remark upon itself to itself, and lose itself in the remark.

The representation of reality has been a crucial issue in Western education since Socrates decried to Plato the effects of the technology of literacy on true learning and memory, "Your instruction will give them only a semblance of truth, not truth itself. You will train ignorant know-it-alls, nosey nothings, boring wiseacres" (Illich & Saunders, 1988:26). Illich and Saunders add to this debate the origin of the idea of representing reality through the technology of writing, "Appropriate description of reality began as a jurisprudential method before it became the foundation of the natural sciences" (p. 36). The alphabetization of thought became the institution of education, yet the effects of the alphabet on nonalphabetic oral cultures have until recently been rarely discussed. Literacy has been made visible because the age of electronic imagery brought it to light. Traditional orality and its connection to the earth are the best defence against the effects of both the alphabet and electronic imagery, and may arise as a respected art form. Literacy, like orality subscribes to the proverbial wisdom of Marshall McLuhan (1964) who said that he didn't know who discovered water, but that we could be sure that it wasn't a fish. We discovered what literacy was only when it arrived and when it is on its way out. If nothing else, literacy has warped the oral conception that truth resides within, as interior, by favouring truth and belief on the page as outside, or exterior to the spirit and mind. This reconceives the wisdom of silence as the quality of the know-nothing and the ignoramus. Illich and Saunders (1988) point out the effect of the transition to literacy

> My *oath is my truth* into the twelfth century.... Only in the thirteenth century does Continental canon law *make the judge into a reader of the accused man's conscience*, an inquisitor into truth... Truth ceases to be displayed in surface action and is now perceived as the *outward expression of inner meaning accessible only to the self.* (italics added, p. 85)

Literacy is biased toward absolutism. Under its influence reality is conceived as singular, because it is represented as singular. In oral cultures reality is composed of many realities in balance and unison, and is known by one's ability to become these realities. Oral reality does not favour print because its economy of expression appears to circumvent lengthy analysis and logical argument. The tremendous economy of expression of oral stories encourages silent reflection on its truth and therefore blesses the listener with a resonant silence as familiar and thankful as the quiet of the earth. The map is incidental to an unalphabetized culture able to silence the mind to hear the territory. As Neihardt (1979) quotes Black Elk, remembering a childhood experience of healing. Black Elk reflects on the vision which at nine years of age established the ontology that would transcend the realm of written symbols:

> Also, as I lay there thinking of my vision, I could see it all again and feel the meaning with a part of me like a strange power glowing in my body; but when the part of me that talks would try to make words for the meaning, it would be like fog and get away from me.
>
> I am sure now that I was then too young to understand it all, and that I only felt it. It was the pictures I remembered and the words that went with them; for nothing I have ever seen with my eyes was so clear and bright as what my vision showed me; and no words that I have ever heard with my ears were like the words I heard. I did not have to remember these things; they have remembered themselves all these years. It was as I grew older that the meanings came clearer and clearer out of the pictures and the words; and even now I know that more was shown to me than I can tell. (p. 49)

Alphabetization has threatened the silence required to know the world on its own terms and so to explore its delicate balance. The technology of the alphabet does for the mind of the observer what a swarm of bees does for a picnic, the letters will not leave the mind alone. Tremendous authors have written powerful words, yet for all of their power these words can and often do lead away from the centring influence of the earth.

As teachers I believe we must be aware of the effects of both alphabet and media, and we must encourage reflection, stillness, quiet, and sensory awareness to compensate for the compulsive mind created by the map. In Eastern culture, Zen Bhuddism and Yoga are potent techniques for quieting the mind and spirit in highly populated lands no longer easily able to experience nature. Native oral culture on the land was a balance of words and the things they represent—aware that balanced senses were necessary for the representation and, more importantly, the experiencing of reality. Native oral culture prevented the cultural mistake that happens when learning occurs under the domination of the eye's appreciation of the visual symbol alone—believing the symbol and the thing it symbolizes are one. It is imperative to again know the territory as did our grandfathers, before the traditional balance and power in perception was subjected to the solipsism of conception. Before drowning in alphabet soup.

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CHAPTER IV. A PROFILE OF RECENT PUBLISHED WORK ABOUT ENVIRONMENTAL EDUCATION

Environmental education is a major topic in education's academic and applied literature. It is a phenomenon of the past 25 years; there is little in the literature before 1970, when a steady increase in publication reflected an apparently growing public awareness of the necessity for education, at all levels, about the environment. The last five years of the 1980s saw a kind of peak. Each year since 1983 between 200 and 330 new articles, published in academic and professional journals or readily available on microfiche, have been added to the literature.

The provenance of the work is varied. Reports are generated by individual researchers, educationists, and curriculum developers; governments at all levels; international not-for-profit organizations; corporate publishers; and big business, particularly businesses involved in energy.

The nature of the work is as varied: curriculum resources, research about pedagogical methods, low-level pedagogical theory, some social theory about education respecting the environment, explanation of pedagogical and environmental models, polemic and essay, reports of educational projects in schools and communities, teacher education material, manuals on how to get grant money for environmental education projects, and massive compendia of conference reports and state-of-art summaries.

A 10-year retrospective on the literature include more than 3,500 print sources that deal in some way with environmental education. More than 80 major books are in print, not about the environment generally, but specifically about environmental education. If the academic journal articles peaked in terms of number around the turn of the decade, the number of books has yet to reach its peak: almost half of the books now in print about environmental education have been published since 1990.

In order to get a current picture of the nature of the academic literature, a search was conducted in the *Educational Resources Information Centre* (ERIC) Database for published articles and copies of unpublished papers presented at learned conferences, but available through ERIC, during the period 1991 through December, 1993. Other databases that were searched included *Books In Print* (R.R. Bowker Company, New York) and Sociological Abstracts (Sociological Abstracts, Inc.) concatenating these topics

environmental education,
environmental education programs,
environmental education and North American Indians, and
experiential education and environmental.

The search generated 1,863 titles of works related to environmental education. In most of those works, environmental education is of secondary concern, or there is some implication for environmental education in a study focused on a different topic. A total of 231 titles were identified by limiting the works to only those in which environmental education is the primary focus of the work.

The discussion below sometimes includes reference to the number of titles, out of the 231, that deal with the topic in a specific way. The numbers are mentioned only to demonstrate a relative focus in the literature, not to imply an evaluation of the literature by precisely quantifying the focus. Citations to specific works are provided by way of example.

Themes In The Literature

Information

Overall, there is a high degree of concentration on issues of information manipulation for the behavioral objective of change. This suggests a faith of substantial measure in the power of information and reading as the primary and most efficacious source of that social and individual change considered so urgent in its importance for global ecological survival. However, the frequency of use of global paradigms suggests a scale of utterly enormous dimension.

The focus on information includes two broad assumptions, that the information we now possess requires reorganization, and that information about the environment is the basis for behavioral change. It harkens back implicitly to an older idea about a gradually additive science increasing the general sum of knowledge in the world.

Reorganization of Information

The first assumption is that we need a reorganization of available information about the environment in order to create a curriculum appropriate to the task (Anonymous 1991; Buchan 1992; Covington 1991; Hayes 1991; Kool 1992; Marcinkowski 1991; Sigman 1991; Skelton and O'Neil 1992). Within that call for reorganization of our information bases there are some specific outcomes anticipated; for example, the reorganization may be seen as necessary in order to create environmentally literate citizens (Kalinowski 1991); or necessary in order to allow for better review of quality of literature (Neidermeyer 1992); or as a review of the correlation between database access and community action (McCallum et al. 1991). Eleven works deal specifically with the reorganization of information about the environment.

Information As Basis For Behavioral Change

The second assumption is that information is the basis for behavioral change. Topical elaboration based on that assumption of how behavioral change follows from

1. general improvement of access to information (Disinger and Schonfeld 1987; Van Bers and Slocombe 1991);
2. computer-based access to information (Alm 1992; Morgan and Yasso 1992; Osmers 1991; Warshawsky and LeBaron 1991; Wolcott 1991);
3. film presentation of environmental information (Gelhorn 1991; Marks 1992);
4. written sources of information, including classics of environmental literature (Knight 1991; Odum 1992); how to create a compelling debate (Knight 1991); a comparison of two classics (Duffy 1991); an information overview and check-list for environmental education (Alphonse 1991); written information as preliminary to sharpening observational skills (Johnson 1991); and written information as preliminary to ecological restoration (Biniakunu 1991); and even
5. understanding environmental traditions in song (Gray-Whiteley 1992; Seidman and Scott 1989).

Seventeen of the works dealt with ways in which information itself was a foundation for behavioral change. A total of 27 of the works focused on information about the environment, which indicates that concern for environmental information is a major foundation within the field.

Information About The Environment, Societies, and Individuals

A major part of the literature manifestly provides information about the environment.

History. There is a small collection of historical information, not including the work that deals with storytelling. It includes discussions of historical turning points in American environmentalism (Yaple 1991); histories of environment education itself (Baird 1991; Grove 1992; Fraser 1983; Miles 1991); archaeology (Pollard 1991); and such particularistic work as information about place name origins, based on literary and historical records (Palma 1978; Posch 1992). Eight works dealt with historical information about the environment.

Nature As Source. Some of the literature deals with nature as a source for calibration, to increase knowledge or to create understanding of environmental degradation. Calibration and measurement is the specific focus of Laird (1991), Leon (1992a, 1992b), Ramondetta (1992), Wronski (1992), and J.E. Young (1991). Mathematical or accountancy models as a basis for measurement are the focus of Frid (1991), Laird (1991), and Roth (1992); and Frost and Jones (1991) deal with genetic manipulation. Nine works were classified in this category.

Information Concerning Societal Developmental Issues. A major component of the literature provides information about developmental issues, the largest single category (33 works) of the 231 reviewed. Those may be categorized as follows:

(a) national developmental issues (Alexopoulou and Floiatus 1991; Benayas 1991; Boutard and Sauve 1991; Brady 1991; Eulefeld 1991; Goffin 1991; Harris 1991; Lazarus 1991; M. Mayer 1991; Newport and Hehn 1991; Organization for Economic Cooperation and Development 1991a, 1991b; Souchon and Giolittos 1991; Stohl 1991; Subbarini 1991; and Trant 1986);
(b) developmental issues related to gender (Kremer 1991);
(c) war, peace, and security relative to development and the environment (Brown University Center for Foreign Policy Development 1992a, 1992b; Deudney 1991; Kohl and Benedok 1991; Mische 1992);
(d) population and the environment (Muley 1991; Population Education 1991; Taijin 1991; United Nations Population Fund 1991); and
(e) global developmental issues and the environment (Fien 1991; Jickling 1991; M. Nickerson 1992; Organization for Economic Development and Cooperation 1991c; O'Sullivan 1991; Slocombe 1991; Stapp 1991).

Individual and Cognitive Development. Another major part of the literature deals with information about individual cognitive or social development, relative to the environment itself or to environmental education as a process. The most focus in this body of work is given to individual developmental stages, and the assumption is that information about developmental stages much be known (and subscribed to) in order for environmental education or outdoor education to be effective. A total of 32 works are categorized under this heading. Those works are further subdivided into

(a) articles that deal with comprehensive theories about educational stages (Caduto 1983; Clearing: Environmental Education in the Pacific Northwest 1991; P. Duffy 1991; Kestler 1991; Roger Tory Peterson Institute of Natural History Forum 1991; Ramsey 1992; Roller 1984; Scalia 1992; Wisconsin State Department of Education 1985);
(b) specific reference to Piaget's and Kohlberg's developmental stages (Caduto 1983); and
(c) by age (arranged here according to the stages of Kieran Egan's model): Fraser 1983; Sigman 1991; Walburn 1992):
    mythic, in Grades 1-3: Weilbacher (but not with stories) (1991); Rivkin (1992) (personal ecology); D. Young (1991) (drama); Kolkin (1991) (calibration of and identification of natural elements); Perkins (1986) (children's preconceptions regarding nature, globally); Perdue (1991) (outdoor soil and biodegradation experiments); Eltayib et al. (1985) (status of environmental education in Sudan); Pomerantz (1991) (analysis of elementary school natural resource lessons);
    romantic, in Grades 4-8: Hunter (1991); Murphey (1991); Close Up Foundation (1991); Wendling (1989); Sigman (1991); Alberta Department of Education (1991);
    philosophic, Grades 9-12: Brown University Center for Foreign Policy Development (1992a, 1991b); Simmons (1991);
    Ironic, college/adult and beyond: Payne (1991); Disinger (1991); Field (1991); Fien (1991); Posch (1992); Scott and Oulton

(1992); Priest (1988); Vizzer (1992); B. Martin (1992); Dennison (1992); N. Nickerson (1992); McLean (1986);

(d) cognitive development specific to minority youth (Morris 1975; Durning 1981).

Perspectives and Topical Approaches

Another major part of the literature discusses perspectives from which environmental education is, or could be, articulated. There is some overlap with other categories (e.g., information about a particular perspective, methods in teaching environmental education), but discussion about perspectives and foundational issues is an important part of the literature in its own right. Some perspectives are limited to specific topics.

Single-Focus Topical Approaches

Health Issues. Health provides an approach to environmental education in Hunter (1991); Najafizadeh and Mennerick (1991); Evans (1991); and Association for Education in Journalism and Mass Communication (1991).

Law. Law as a topical approach to environmental education may be treated in general terms (e.g., Filipczak 1992; Clements 1991); with reference to legislation (Heylin 1991); or with reference to such issues as patriotism (Schlene 1991).

Climate. Global warming is an example of a single-focus approach to environmental education, as treated in Sinclair (1991).

Bioregions. Bioregional perspective provides a specific perspective on environmental education that can include all the current concerns of the field. It may be objectified on its own (Cortese and Creighton 1991); or dealt with in connection with other specific approaches: bioregionalism and local knowledge (Posch 1992; McNaught and O'Donoghue 1991); bioregionalism and cognitive development (Mayer and Fortner 1991; Dutkiewicz 1980); the bioregion of a river, using the river as a barometer of environmental health (McDonald 1991); or using a lake system (International Joint Commission 1991); the study of bioregion, using wetlands as curriculum (Vandas 1992; Sigman 1991); and bioregion in connection with specific technologies, such as using satellite communications in a bioregion in environmental education (Osmers 1991).

Perspectives

Sustainability. Sustainability, dealt with in 18 works, is a topic that drives some environmental education. It is treated in general terms in M. Nickerson (1992), Perkins (1986), Van Bers (1991), Burton (1992), Anderson (1992), Wronski (1992), Tudor (1991), and Baines (1983).

Sustainability is an issue particularly with respect to energy issues (Riley 1991; Leon 1992a; Wellnitz 1992; Markle 1991; Stone and Sherman 1992; Sedgefield and White 1978) and the concept provides a motivation for curriculum in Marker (1991), and specifically as a lesson in non-nuclear energy usage in Kohl and Benedok (1991).

Holism. A small number of works propose an environmental education based principally on the concept of integration and holism. Hunter (1991) deals with the concept of holism with respect to health, relating self to world. Other works deal with holism in general terms, relating microcosmic and macrocosmic, polychronic with monochronic perspectives (Seaberg and Baldwin 1992; Markle 1991; College of the Redwoods Evaluation Report 1974; Shkarban 1991; Airhart and Doutt 1991).

Native North America. A relatively large number of authors deal in some way with environmental issues and environmental education relative to Native North America. Examples of the topical extent of that reference are

(a) methodological, using stories (Bruchac and Caduto 1988, 1991; Horwood 1989; Quinn 1993; DeFaveri 1984; Sharpes 1974; National Association of Conservation Districts 1988); with reference to plants of Indians, using ethnobotanical knowledge (Russell 1991); as a source for intercultural experience (Goffin 1991; Madsen et al. 1981); and using Native North American stories of land, derived from literary text (Fraser 1983; Tyree et al. 1983; Caduto 1984);
(b) relative to cognitive development and place (Clearing: Nature and Learning in the Pacific Northwest 1986; Roller 1984);
(c) as a critique of science (Geer 1992; Kesson and Gough 1992);
(d) as a proto-science (Kaira 1974; Cordero 1992; Russell 1984);
(e) as a social and ecological unity Roller (1984);
(f) relative to school ages in keeping with higher education (Sedgefield and White 1978; Native American Career Education Unit 1977);
(g) with reference to place names (Solnit 1992);
(h) as a source for new definitions of nature and wilderness outside the entrenched concepts of Western culture (Kaus and Gomez-Pompa 1992); and
(i) concerning land and ancestral sites (King 1984; Akula 1992).

Ethics. There is an ethical perspective motivating environmental education, and it is dealt with in a literature that addresses ethics, attitudes and values to be discovered in and through environmental education (Seagreaves and Anglemyer 1984; Anglemyer 1980; Oldenski 1991).

Spiritual Bases. Spiritual approaches to nature are the focus of a very few number of works (Vahey 1992; United Nations Environment Program 1990; Kohl and Benedok 1991; Whitcombe 1991).

Instruments, Methods, and Outcomes

Much of the literature that deals with information and perspective includes either implication and assumptions about methods of teaching and learning. The literature about information, particularly, implies particular methods (e.g., with respect to media and interaction) but there is a body of literature that deals specifically with other pedagogical methods and that is the work that is categorized here. Expected outcomes, again, are tacit in much of the other literature, but when an objective or outcome is explicitly the focus of a work it has been included here.

Participation

Outdoor Education. An extensive literature on outdoor education is focused on techniques and pedagogical outcomes related to environmental education. A sampling of the tacks taken in that literature includes the following topics: outdoor education

(a) as a source of a new cosmology (Ingleton 1991);
(b) its effect, or absence of effect, on environmentally ethical behavior (Dobey 1991; Sakofs 1991);
(c) creating sensory awareness (Burns 1991);
(d) for encouraging the experiential (Roger Tory Peterson Institute of Natural History 1991; Hanna 1991; Matthews 1992; Cox 1991; Gemery 1992);
(e) as beneficial for small group experience (Priest and Spence 1992);
(f) and its effect, through experience, on cognitive development (Priest and Spence 1992; Monroe 1991);
(g) as opportunity for behavioral change through animal care (Matthews 1992; Cox 1991; MacTavish 1992; Sigman 1991; LaHart 1991; Sigman 1991);
(h) as a method to ameliorate indoor/outdoor, urban/nature dualisms (Scalia 1992; Bank Street College of Education 1991; Gemery 1992;
(i) for comprehensive restoration (Seaberg and Baldwin 1992); and
(j) as leadership training (cited in several of the above).

Directed Participation With Land. Not specifically "outdoor" education, but directed or programmatic participation in, on, or with land, is an education strategy that may be employed in environmental education. In two works it is suggested as a way to do away with the nature/culture duality (Kolkin 1991; Seaberg and Baldwin 1992). Others discuss directed participation in "creating a green campus" (Creighton and Cortese 1992); and how travel and adventure might be a strategy for directed participation with land (Skelton and O'Neil 1992).

Directed Observation. Directed observation of nature may be considered to be prelude to, or the source of ethics (Buchan 1992); adventure (Skelton 1992);

outcomes, from literary texts (Johnson 1991); lifelong environmental sympathies and interests (Roger Tory Peterson Institute 1991; LaHart 1991).

Gardening. Gardening is specifically suggested a source for creating nature/culture harmony in two works (Dwight 1992; Gray-Whitely 1992).

Ecological Restoration. Participation in ecological restoration as a method in environmental education is discussed by five authors (Seaberg and Baldwin 1992; Creighton and Cortese 1992; Pollard 1991; Biniakunu 1991; and Scalia 1992), the latter in a specifically urban context.

Reflection. This is not necessarily active physical participation with nature, but reflection, "mental" participation with nature, is discussed in terms of outcomes. It is clear that there is a current in the literature that suggests that reflection on nature leads to long term life change (Hickel 1991); and that it may be a motivator for environmental activism (Monroe 1991; Fallis 1991; Viezzer 1992).

Building a sensitive relationship with nature can create or enhance regional identities, specific cosmologies, and cultural diversity (Kornberg 1991; Maude 1991); or can be a source of cultural criticism (Gough 1990).

Vocational Education

Some work in vocational education deals with vocational training for environmental purposes (Stenger 1991; Scott and Oulton 1992; Gagliardi (1991); Camozzi 1992), the latter in partnership with industry and universities. There is some limited discussion of the application of technologies in environmental issues, relative to vocational education (e.g., Weis 1990; Flor 1990; Gagliardi 1991; Zoller 1992; Iozzi 1982); and at least one author Roebottom (1991) takes issue with technological rationality of vocational education for involvement in work related to the environment.

Management

This literature discusses mainly some strategies for managing environmental crises. It may be oriented toward managerial and professional perspectives (Fein 1991; Gagliardi 1991; Gemery 1992) or deals with education for environmental crisis management from other perspectives, e.g.:

(a) science as an explicit basis for managerial acumen (Weis 1990, 1991; Neuhauser and Mullins 1991; Marcinkowski 1992; Roth 1992; A. Martin 1991, 1992; Kool 1992);
(b) environmental literacy as science (Roth 1992); and
(c) science and technology as a basis for understanding and managing environmental crises and health (Zoller 1992).

Story

The story (other than Native American story) is proposed as a technique in environmental education (D. Young 1991). Specific uses of story include the use of science fiction as an opportunity for post-modern integration of nature and cosmology (Kesson and Gough 1992); the concept of doom, as related in story, as a compelling source of inspiration in environmental education (Nelson 1990); as a way of sounding the alert (Anderson 1992); and as a way for identifying "friendly" themes for exploring the way that pollution steals the future (Burton 1992).

Stewardship and Conservation

Environmental education is conceived as a promoting stewardship of the environment (Horwood 1991; Young 1991; Adler 1992). It is seen as a foundation for consumer literacy (Minnesota Consumer Education Program 1991); and discussed in terms of motivation for recycling (Martin 1992; Raze 1992; Adler 1992; Burger King Corporation 1991); motivating composting (Chemical Manufacturers Association 1992); creating an awareness of waste (Riley 1991; Young 1991); or creating an awareness of toxins, pesticides, and other pollutants (Filipczak 1992; O'Brien 1991; Forbes 1991).

Wilderness conservation is both an outcome and process in some work. The concept of wilderness and conservation is discussed in Hopkins (1991); Inglis (1991); Soil Conservation Service/Department of Agriculture (1988); and National Association of Conservation Districts (1988).

Summary

The literature is heavily oriented toward information, its management, interpretation, and accessibility. Themes that cross all the categories are (a) environmental degradation; and (b) crisis management. In that context, discussion of particular perspectives (e.g., law, health, environmental and resource sustainability, regionalism) are like the literature that deals with particular strategies: environmental education is *for* creating attitude, values, and ultimately informed action. A summary judgement about the literature is that a concept of information drives the enterprise.

Commentary

There does not seem to be much concern with any kind of spiritual connection with nature in non-Native traditions. This is particularly unusual given the pervasive influence of deep ecology and eco-feminism, both avowedly spiritual in their convictions. Their influence throughout the rest of the environmental movement, which is substantial, appears to count for little in the literature readily accessible in this database.

Any call for including First Nations elders in environmental education is too general, except for some specific program descriptions where their inclusion has been reported. The concentration on institutional mechanisms for the establishment of environmental education is admittedly obvious in a database of educational publications but warrants attention as a thematic that suggests environmental education is implicitly technical and institutional rather than inherently cultural. This is worrisome as a matter of legitimation because it is precisely this legitimation and faith in educational technique which prohibits elders from being sources of legitimate wisdom. There is little regard for Native conceptions of "place." In terms of native tradition, there is an inconsistency in the sense that the database implication is that it is possible to read one's way into elder earth wisdom. Reading obviously does not prevent such a maturation from taking place but such a view neglects to award a significant role to the natural process of aging and its various cognitive correlates.

The relative absence of examples of non-institutional learning also suggests a tension in the discourse indicating a requirement for reading and writing as more important than any other single source of knowing except in Native North American tradition and some aspects of outdoor education. It is significant to note that sources of non-literate tradition, certainly the longest tradition of nature thought in the world, are completely neglected except as they concern Native North American tradition.

The physical and vocational are also marginal to the managerial and mental. This suggests that even though the physicality of nature is one of its most obvious features, the relative degree of engagement with it is considerably less than thinking about it as a literate and non-material phenomenon. Vocational and managerial/professional discussions are framed without reference to cooperation between nature and culture but rather in terms of using technology for purposes of domination. A discussion of technocratic rationality is noted. This disunity between the physical, mental, and spiritual suggests an imbalance relative to the balance required in Native North American tradition.

Discussions concerning the use of local knowledge have not mentioned inclusion of Native North American tradition and its voices. Similarly for gardening and ecological restoration which appear to require little previous grounding in the unity of mind, body, and spirit.

There is an indication of a non-Native North American storytelling tradition but its claim to potency does not appear to be grounded in an informed theory of Native North American storytelling tradition. The noted need for new cosmologies and the potential afforded by both the "genius of place" and the traditions of Native North American storytelling tradition appear neglected. The mythological traditions of European settlers appear to have been neglected as well in the creation of new cosmologies or the recognition of the traditions of the guardian spirits of "places."

The integrated or holistic curriculum does not account for those practises of place consistent with the intelligence of place recognized in Native cultures. Oddly, an integrated or holistic curriculum does not attend to gardening/restoration and harvesting/mythopoeic storytelling as representative of the most ancient, complex and widespread forms of pre-modern knowledge and community.

Missing as well, is a discussion of the possibility for reform of technological culture through principles discovered in the natural environment.

Lastly, the false dichotomies of nature/culture appear systemic to this discourse, although the plea for this foundational assumption to be altered in the embrace of Native North American traditional monism is noted.

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CHAPTER V. ALIENATION AND INTEGRATION: ENVIRONMENTAL EDUCATION AND AMERICAN FIRST NATIONS

Only when you have felled the last tree, caught the last fish and polluted the last river, will you realize that you can't eat money.

—Popularly attributed as "A Cree Prophecy"

Introduction

North American First Nations have always had a place in environmental educational thought, even though that place has often been to stand as a symbol of some aspect of conservation.

The range of that appeal nowadays is fairly wide. There is a literature that is foundational to the definition of environment. Some of it critiques scientific approaches to environmental thought, based on epistemological premises said to be those of First Nations (Geer 1992; Kesson 1992). A complementary discussion offers First Nations perspectives as a more nearly valid way to inform scientific inquiry about the environment (Cordero 1992; Cornell 1990; Kaira 1974; Russell 1984). Articulation of aspects of First Nations cosmology are sometimes offered as contributions to environmental education (e.g., Kaus and Gomez-Pompa 1992; Roller 1984; Russell 1991).

Another thread in the environmental education literature is foundational in the sense that it defines the enterprise of environmental education with reference to children's developmental sequences, and discusses environmental education and First Nations peoples in some way that is meant to inform the way we segment environmental information for presentation to learners (e.g., Clearing 1986, 1991; Native American Career Education Unit 1977; Roller 1984; Sedgefield 1978).

Definitions (or approximations) of First Nations premises motivate another literature to discuss a methodological direction based on indigenous thought. That direction involves two main activities, the telling or reading of First Nations stories as a way of knowing about connectedness to the environment (e.g., Caduto 1984; Caduto and Bruchac 1988, 1991; DeFaveri 1984; Fraser 1983; Horwood 1989; National Association of Conservation Districts 1988; Quinn 1993; Sharpes 1974) or the direct experience of a "natural" environment either through outdoor education or through learning directly from First Nations authorities (e.g., Henley 1989; Stiegelbauer 1992).

In very recent years a number of learning resources for environmental education have been created by, or in cooperation with, First Nations groups. The Indian Nations at Risk Task Force in 1990 published a report of an exemplary multimedia, computer-based program in environmental education at Hualapai School in Peach Springs, Arizona. Ethnobotanical and scientific information are presented, and community elders participate in the program which is conducted in the Hualapai language (INAC 1990). The Nez Perce Nation of Idaho has applied traditional principles to the technical organization of information about its local environment, and includes information for environmental education in that organization (Simonelli 1992).

Appeal to First Nations premises is not a new phenomenon at all, but has its origins in some of the earliest formal work in conservation education, environmental education, and outdoor education. In this paper I refer to two men whose work was foundational to environmental education during the first half of this century and whose use of their own constructions of Indian ideas was integral to their environmental thinking. This paper is not a history, however, but an illustration of the ways in which North American Indians have been included, used, misrepresented, or incorporated into environmental education.

The illustration hangs on a central point: First Nations cultures, like other cultures, have criteria for evaluating who can represent cosmology and epistemology with authority. The history of the environmental education movement respecting First Nations peoples is a history of appropriation. When people who do not have the authority, in cultural terms, to represent belief systems, knowledge, and the rationale behind practice, attempt to do those things are misrepresented.

For most of the history of American and Canadian environmental education, American Indian thought has been defined by non-Native people and has been romanticized. In other words, it has been appropriated and put to use in an agenda that, while it might be consistent with many aspects of First Nations epistemology, is not part of it. The knowledge has been alienated from its origins. The people involved are alienated from each other in such a process.

Though some of the early work in conservation education appealed directly to romanticized notions of Indians' connections with nature, the environmental education movement has been largely alienated from those origins, and is instead primarily an information-driven enterprise based most coherently on scientific definitions (not in themselves in any way obviating First Nations principles), technological intervention in natural processes, and "management" of an environment. First Nations people themselves have had little to do with the definition of environmental education until recently. Recent trends in the literature are calls for integration. I do not mean the kind of integration that sees a "mainstream" environmental education that is open enough to "integrate" First Nations belief systems, knowledge, and practices, but an environmental education in which First Nations participation is integral.

The illustrations that follow in this paper bear this implicit evaluation: to what extent do they represent alienation and to what extent do they represent the kind of integration referred to above?

Local environmental movements in areas where relatively large numbers of First Nations people live have seen participation by First Nations in regional environmental and conservation groups. It is now probably somewhat more common to see First Nations groups, themselves, define the terms of their participation in environmental movements and environmental public education. All over North America indigenous environment groups work to educate a non-Native public as well as Indians. The initiative has been taken by individuals—a good local example of that being Edmonton's Mother Earth Healing Society, founded by Lorraine Sinclair. Regional First Nations governments, traditional leadership, and First Nations interest groups are vocal about environmental issues. For example, the Indigenous Environmental Network, along with Midwest Treaty Network and Sokaogon Chippewa Community (Wisconsin) is hosting an international Protect Mother Earth Conference in Wisconsin in June, 1994, a conference which has been held five times before in "Indian country." One if its manifest purposes is to bring together members of the "mainly non-Indian environmental community" with "Native activists" (Ackley et al. 1994): the conference is manifestly controlled and run according to First Nations principles. It is an Indian organization with an Indian agenda, and it is one of several regional and national organizations.

Formal environmental education in schools has seen somewhat less involvement by First Nations peoples, but that may be changing as First Nations governments assume more autonomy in administering schools, and as environmental education moves outside school.

I propose to illustrate appropriation and integration of First Nations knowledge by discussing two notable figures from the history of conservation education during a long period in which that kind of knowledge was romanticized. I discuss another source of information about First Nations environmental ethics which has not seen much notice in environmental education: ethnography. Then I look to two recent examples of the call to re-inform environmental thought with First Nations principles. Finally, I look to two current examples of the integration of First Nations principles in methods for environmental education.

Romantic Idealism

Ernest Thompson Seton

The eldest in the ranks of popularizing romantic idealists in settler environmental education is Ernest Thompson Seton (1860-1946)[4]. He was a naturalist, novelist, wildlife illustrator, painter, and a founder of the scouting movement. In 1902, eight years before the establishment of the Boy Scouts in North America, he founded the Woodcraft Indian movement, an outdoor education program for youth. When W.D. Boyce established the Boy Scout movement on this continent in 1910, he brought together Seton's Woodcraft Indians and Daniel Beard's Sons of Daniel Boone (Hackensmith 1973). Seton was honored to be the

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[4] Anderson's (1984a, 1984b, 1985) work details Seton's appeal to Native American models for an environmental education based on Indian spirituality and environmental knowledge. Keller (1984) and Wadland (1978) have published comprehensive accounts of his work in environmental education.

American Boy Scouts' first naturalist and to write the first scouting manual. He was so thoroughly enamoured of the idea of an Indian base for outdoor education that local scouting groups were organized into "tribes" (Mechling 1980). Both Beard and Baden-Powell, the British founder of the scouting movement were caustic about Seton's reconstruction of aboriginal lore, and Seton's emphatically pro-Native approach to knowing nature eventually led to a power struggle within the Boy Scout organization. The nationalistic fervour of the First World War tipped the balance in favor of Baden-Powell's and Beard's para-military, patriotic, and imperial opposition to white boys' engaging in Indian thinking (Shi 1985), and Seton was dismissed. With his departure from Scouting, Seton's environmental ethno-methodology was no longer central to scouting and was replaced by the militarist paradigm in the tradition of the conquering European troops.

Seton realized the continuing necessity of a sustainable environmental education ethic that would be faithful to the land itself and to the authority of the indigenous environmental paradigm. In 1930 he and his wife Grace founded the Seton College of Indian Wisdom in Cimarron, New Mexico, for the teaching and study of Indian wisdom—spirituality and environmental thought—for both adults and children. Seton's dream of a national federation of environmentally sensitive young men and boys, who, like he, could "play Indian" (Redekop 1979), owed something to his fascination with Tecumseh's vision of a united tribal federation of Native North Americans returning to their "original life-style" (Deloria 1973:251). Seton believed in the praxis and benefits to mental health that were to be achieved through "train(ing) city youth in Red Indian techniques" (Bramwell 1989:93-94). It was a racapitulationist perspective: ecological historian Anna Bramwell (1989) writes that the thing that "gives Seton's activities its characteristically ecological scientific rationale was the belief that boys went through the stages of civilization as they grew up" (93, 94), and of course the "Red Indian" stage was a prior stage to the civilization the boys would enjoy in adulthood.

The historical record shows that the college supported few Native North American faculty, though it had been Seton's desire to locate in New Mexico in order to be close to a "Native culture that was in harmony with the land" (Keller 1984:209). By the 1930s Seton had reconfigured his environmental thought to a kind of bioregionalism, but the college was regionally eclectic, and grew under the direction of Juan Gonzales, a San Ildefonso medicine man (Keller 1984:209), to include both adobe and totem poles. Classes and activities were outdoors for the most part and were focused on human relationships with material culture. Storytelling is not mentioned as a teaching vehicle but may have been subsumed under the college's *Indian philosophy*. There is no available primary research on the influence of San Ildefonso narrative tradition on college activity. The important qualification in any discussion about storytelling is that Seton seems to have been the first author to have made a living from the anthropocentric animal story,[5] and

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[5] In making this claim I recognize both the presence and influence of Aesop's Fables, which, by the time were literate, and those tales in the folk tradition. I include in the folk tradition Native stories. However influential they may have been in Seton's life, they do not appear to have been accounted for in the

Dunlap (1992) points out that he was one of the first writers to popularize animal stories that took account of Darwinian evolutionary explanations of animal behavior.

Beating even Rudyard Kipling and embarrassing John Burroughs with the comprehensiveness of the experience behind his animal stories, Seton bore a mantle as the most popular nature writer of his generation. It may have been all the mantle that was needed to structure a storytelling curriculum. The formative summer camp curriculum of the college, however, was based mainly on material activities, as exemplified here.

> The curriculum they offered was divided into arts and crafts, outdoor and physical activities and leadership skills. Crafts included Navaho weaving, basketry, pottery making (Indian methods, coil and wheel), costume making and Indian design and its modern applications. The physical activities offered were Indian and modern dance, nature study, camping and horseback riding. Leadership skills included Indian philosophy and history and woodcraft. (Keller 1984:210)

Seton's efforts must be seen first in terms of their faithfulness to the Native North American nature tradition before they can be seen as prefiguring the residential outdoor environmental education movement. Seton's work is an attempt at integration. Its effect may have been alienation.

Appropriated Identity: Archie Belaney aka Grey Owl

Settler culture has been certain about what it expects of Natives and Native culture, and so pandering to these preconceptions becomes unfortunately simple. Deft practitioners of good fibbing can convince unknowing but sympathetic audiences. Sylvester Long ("Long Lance," 1890-1932) parleyed an appointment to Carlisle Indian School into a full-blown (and "full-blooded") Indian identity that was more acceptable to whites than his mixed Afro-American/Indian. He became a kind of symbol for a fabricated identity syndrome. As a North American Indian he spoke publicly on behalf of Indian people, perhaps because it was expected of him (Smith 1982). Another man with a fabricated identity, the Englishman Archie Belaney, who represented himself as a mixed-blood Native, was more clearly associated with the environmental movement and with conservation issues.

Belaney (1888-1938) was buried beneath a cross on which was also inscribed his assumed name, "Grey Owl." His importance to environmental education comes from his approach to the animal story, the conservation ethic, and most dramatically, the appropriation of the image of the Indian. He decided to live that image. He immigrated from his native England to Ontario in 1906. Grey Owl's

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secondary literature. Although, in Anderson (1984:234) it is mentioned that under his influence, the teddy-bear emerged as a fund raising technique for the College of Indian Wisdom.

destiny and desire to *become* Native took him from the status of disgruntled clerk who was pesky and spirited enough to "let down the chimney of his employer's office a small bag of gunpowder" (Dickson 1976:17), through a stint as a Toronto sales clerk, to become a greenhorn trapper, apprenticed to a white guide and his Ojibwe partner. When he began to write and lecture about nature and the environment, he professed to be Indian: "Scotch" and "Apache" (Smith 1975, 1990). He eventually became a park naturalist for the Canadian government at Prince Albert National Park in Saskatchewan.

The *Indian* he sought to become can be understood as his becoming what the bush demanded of him. Northern Ontario can severely punish those who seek to live in ways unsuited to the area. To know how to live there was something several generations of white trappers already knew, though they were likely not as conscious of their meta-experience as Grey Owl. Belaney knew that he was transforming into what he was not, but wanted to be. It was after his conversion that he began to write from a perspective that was self-conscious of that transformation.

He kept his distance from his urban roots, in part because of an increasing success in guiding and trapping, but also from his love of the Ojibwe who taught him the ways of the land and the sacred "stories of the animals" (Dickson 1976:28). He doubtless developed his animal stories from the perspective of that tradition, though the secondary literature does not mention, except scantily, any relation to the Ojibwe oral narrative tradition. Biographers have tended to focus on *what he was* rather than what his surroundings made him. Grey Owl himself credits Old Pete Misabi, an elder he came to know after marrying an Ojibwe woman. From Misabi he learned of Ne-ganik-abo ("Man That Stands Ahead"), whom he references in *The Adventures of Sajo and Her Beaver People.*

It was the coming of white settlements and the destruction of the Temagami forest (Dickson 1976:36) that set Grey Owl to the conservation ethic inherent in the oral stories. This ethic, which I have discussed in my work "Wilderness and Storytelling," is revealed as content in the medium of the written animal story novels in which Belaney "anthropomorphizes" the perspective of his pet beavers *Jellyroll* and *Rawhide.* Like Seton, whose stories were discounted for their anthropomorphism (Lyon 1991:66), Belaney was object of the same dismissive attitude that sees animal fables as fit for the young and the savage. However much Grey Owl and Seton teased what dominant culture saw as the line between animal and human, their monism was discounted, along with their *Indian* sensibilities, as unrealistic. In prefiguring the use of photography for telling the tale without words, he used story to demonstrate the factual reality of leg hold traps.

Jellyroll and Rawhide created an emotional identification with many readers, an identification that allowed Belaney to argue for living an ethic based on a traditional way of life, which he summarized as "hunting game, not recklessly but as though they were farming it" (Dickson 1976:29,30). His rejection of cash economies and technologies was underwritten by enthusiasm for the old ways and a being in nature as it was meant to be. His demand to settler culture was a call to live the right way, and the fact that he used story to make that demand demonstrated his conviction that story defined that right way.

It is difficult to reconcile Grey Owl's articulation of a truth with Belaney's deception. The most telling judgement is the statement Lightning (1992) attributes to Elder Louis Sunchild: you cannot reach truth by way of a lie. In a most fundamental way, Grey Owl did not appear to have authority in Ojibwe terms, and that makes his pronouncements suspect. Yet Grey Owl lived nature as an unfolding of story and experience, and in so doing imbued his writing with the ethic of love. His ethic of conservation and preservation was as much concerned with the experience of nature as it was with the faith he shared with Seton, that if one experiences the land in ways that are consistent with the land, as Native peoples did, then the cultural, technological, spiritual, and physical experience of it would be sufficient to confer the right kind of knowing and living. The ethic, in other words, came from the experience. Grey Owl wrote in ways that bestowed credit to the Native way but which also led to an impression that soil mattered more than blood or culture in the creation of identity. He usurped the lessons of the culture that taught him to survive but, giving him his due, he appears to have used the knowledge judiciously. Grey Owl's experience, in part, answers the question of how long it will take members of settler culture to be here before they can be prepared to learn and accept for themselves the influence of the land. He came to North America to find just that influence, and his adaptation might be seen as a possibility of what can happen with an open heart.

Grey Owl's appeal was not to individual and essentially bourgeois experience, as were Thoreau's and Emerson's. His near starvation and poverty were testimony to that. Grey Owl demonstrated how quickly the self-evident ethos takes hold when being in sensitive relation to place. His experience is a testament of the indispensability of Native guidance in achieving that cultural extension which expands from—and honors—place. He was a good storyteller precisely because he was able to write about nature as he lived it as a story of relationships.

In his impersonation he did not honor the complex vitality of his own identity, except perhaps in the verisimilitude of his impersonation. Through the transformation to an assumed Native identity he was personally successful in advanced woodcraft techniques, but his representation of Nativeness left genuine Native identity adjunct and romanticized. In accepting that a white man was attempting to understand Native ways, Grey Owl just might have been a healing force rather than a damned fake. His Ojibwe wife, Anahareo, summed up the snowballing effect of his fictive identity as a story that white North Americans increasingly wished to have told to them, perhaps, in the desperate attempt to find a story suitable to making their own transitions to a mythic sense of what it means to be here. North Americans who listened to him used Grey Owl as a way of finding an enduring meaning. Tragically, instead of seeing that myth as growing from their time on this continent, they saw it in terms of an issue of blood legitimacy. The disappointment in the discovery that an "other" was really a "self," that Grey Owl was really not a noble savage, confirmed that he was not a legitimate voice precisely because white people are not supposed to think the way he professed to think. Native storytellers probably understood that in the severity of the reaction against *who* had legitimate voice there was a subsequent damning of content. For dominant society it was fine for an *Indian* to be quaint and charming with animal stories but should a white man be exposed as having learned what was mythic, then he must be treated as traitorous and subversive no matter the validity of what he writes. Anahareo (1972) recounts the episode of Archie's death and the obituary notice revealing his identity as an "Englishman."

> Grey Owl, the imposter of the century; the modern Bluebeard; the magnificent fake; the greatest imposter in literary history; Grey Owl, fraud, hoax, etc. ... I thought of the worries, the near-starvation that we'd gone through after he quit the trap-line, of his writing and lecturing, of all the time and effort he'd put towards conserving wildlife, and it was awful to think it was all for nothing. Archie's public felt they'd been gypped, that he'd only been after a fast buck. This wasn't true, for a great part of the money he had made was spent in furthering his conservation ideas—his two films alone had cost him 40,000. Archie had not only given his earnings, he had given his life. ... One never reads of a full-blooded Englishman, Swede, or German writing this or that ... but everything Archie did was preceded by "full-blooded Indian." (179)

Anahareo's contemplation belies a larger and more deeply racist issue of wanting to deal with Natives as images forged from a white hunger for a plausible story set by settler standards alone. Grey Owl proved the possibility of profoundly and individually feeling the transformations of self when experience with the environment is primary. In this way he made the "savage" human in ways that the urban public was willing to accept only because they still believed—and this is my interpretation—that Natives were still savages. Grey Owl, with superficial knowledge of a deeply established tradition, learned to tell the land by the principles of the land. In "getting his words right," he proved there were stories that were to be told that came from living rightly on the land. It was not Anahareo who objected to his story tellings.

Regardless of how good the reading was and how sane the content of the story, the public that was unable or unwilling to make their own stories of *being in place*, were happy to consume his stories as commodity. Thereafter, the Indian and quasi Indian environmental bestseller disappeared. Akin to the nature faker debate between John Burroughs and Ernest Thompson Seton, in which Burroughs suggested that the naturalist falsely attributed human qualities to animals, in the public reaction against Grey Owl there was initial delight at Native eloquence. This was followed by an ethnocentrism profoundly confirming that the people the whites had long equated with beaver gleefulness were not themselves up to the noble discussion of conservation. The depth of Native teachings languished under racist sentiments.

Ethnography: Richard Nelson

The environmental education corpus does not show much evidence of the ethnographic tradition as ethnographers have described other cultures' perception of the relationship of humanity to nature. There are reasons for this. One is that the idea of environmental education seems largely to focus on individual minds, to assume that collective behavior will result from more and better information being made accessible to individuals. There is a monumental corpus of ethnography and ethnology that in fact deals with human relationships in nature and other societies' apprehensions of that relationship. Most of that literature is written as objective report and analysis. One of the constraints of cultural relativism is that other cultures' attitudes and opinions are understandable only in the context of the whole universe of that specific culture, so it would be inappropriate to discover an ethic in another culture that would give the anthropologist direction for her or his own. That posture, of course, is contradicted by the action and advocacy of many practising anthropologists, but it is a posture that has been typical of objective ethnography. It is not surprising therefore that normative environmental education might look to ethnography of other cultures in order to compare an environmental ethic with our own, but not to suggest that anything in ethnography might inform a universal or cross-cultural environmental ethic.

Nelson's ethnography of the Koyukon people of the Athapascan family along the Koyukuk River in the interior Alaskan boreal forest does not fit that mold. It is a natural history told through the teachings of the Koyukon people and through description of their behaviors and beliefs concerning their locales. As representative of a native natural history it stands outside the established realm of Western natural history and its benefit to environmental education is in depicting "how real and tangible the Koyukon belief in nature is" (Nelson 1986:xv). Writing from his experience of living with and talking to the people, he is able, as an apprentice, to give a preliminary introduction to the depth of a philosophy that has two fundamentals. First, "the proper role of mankind is to serve dominant nature" (1986:240), and second:

> One of the principles emerging from the Koyukon ideology—perhaps the basic principle—is that a moral system governs human behavior toward nature. The proper forms of conduct are set forth in an elaborate code of rules, brought down from Distant Time. Through this code, deference is shown for everything in the environment, partly through gestures of etiquette and partly through avoiding waste or excessive use. In the Koyukon world, therefore, human existence depends on a morally based relationship with the overarching powers of nature. Humanity acts at the behest of the environment. The Koyukon move *with* the forces of their surroundings, not attempting to control, master or fundamentally alter them. They do not confront nature, they yield to it. At most they are able to placate and coerce nature through its spiritual dimension. (1986:240)

The absence of that kind of ethnography in environmental education is an ongoing problem for the field, going all the way back to Seton. The tenets of dominance rather than cooperation are firmly entrenched in Outward Bound and the Boy Scouts. What ethnography offers is a demonstration of the shortcomings of this idea of disjunction from nature and dominance of it, by describing how participating and living the life of people whose ideologies confirm an environmental ethic of conservation. An attempt to get at that lesson is what gave rise to woodcraft[6] and summer camp. Recapitulation of the "primitive" in adolescent outdoor development contraverted the effect of learning from nature: it used the outdoor experience as recapitulative fulfilment of a necessary "stage." For Baden Powell, putting youth through that stage was a step in the cultivation of a citizenship ultimately dedicated to the state, rather than a libratory experience of self governance, passivism, and intercultural understanding, as advocated by Seton (Morris 1970: passim). In the ascendancy of Baden Powell's militarism, nationalism, and patriotism as foundational of the main outdoor education movement in the early part of the century, the potential salience of ethnographic description to the movement was obviated.

The potential for the use of ethnographic description in environmental education is exemplified in Nelson's book about the Koyukon. Nelson's contribution is a source book for healing the wound of racism.

A Call to Go Back to the Source

Two very popular recent works call on the modern environmental movement to recognize the importance of First Nations perspectives in a definition of issues. David Suzuki and Peter Knudtson look at the way that the misapprehension of the purview of science, with its requirement to segment, leads us to mistake scientific inquiry for a definition of the real unity of what we observe. They look to principles articulated by First Nations elders as confirming that unity.

Jerry Mander's thesis is that modern perspectives have been so clearly informed by technological media, particularly television, that we have mistaken representation for the sacrament of living in place. His remedy is to go to First Nations spiritual apprehension of living in place to inform modern settler-culture's ideas about environment.

Suzuki and Knudtson

One of the most widely cited explicit references to First Nations environmental wisdom is David Suzuki's and Peter Knudtson's popular book, *Wisdom of the Elders,* published in 1992. They used ethnographic sources and a method of co-professional enquiry between established science and Native elders. It is a book in a completely different voice and motive from anthropology of education and environmental education. Their enquiry attempts to look both at words as well as land, and is successful in talking about the emotional and physical cognates comprising *thinking nature*. The study is useful as a depiction of an experience of place as well as of an experience of language. It recognizes the constraint and responsibility of land to words. Suzuki and Knudtson themselves realize the contradiction of nature's dynamic of autopoiesis being incompatible with the essentially static character of information. Though avoiding discussion of the epistemic differences between literacy and storytelling, they have recognized the contributions of Native North American thought in trying to come to terms with the scientific problem of measurement. They write:

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[6] This term applies to Seton's Woodcraft Indians and subsequent British offshoot movements such as the Woodcraft Folk and the Order of Woodcraft Chivalry.

> The power and utility of scientific reductionism had been demonstrated in physics, where energy locked in all matter was released by splitting or fusing atoms. Yet physicists themselves were finding that the Newtonian paradigm was seriously flawed. Werner Heisenberg discovered that we can never really know what Nature is like because in order to observe it, we have to pin it down and change it. (1992:xxii)

Commenting on the limitations of science and the morality of intervention when aware of those limitations, they recognize the ethic of love, the wisdom of knowing what the human place and role in nature consists of, and how these solutions are necessarily a matter of re-sacrilizing human-nature relations. They quote E.O. Wilson's (1980) advocacy of *biophilia*

> We must rediscover our *kin*, the other animals and plants with whom we share the planet. We are related to them through our DNA and evolution. To know our kin is to come to love and cherish them. (1992:xxiv)

The effect of this love of place is also felt in terms of time. By reckoning that life began in this place and that everything that is there has always been there means that what is there is what makes the culture and the place inseparably special. The designation of "eternal belonging" then is an apprehension that there are differences between being there and being somewhere else. It is as though being there was being within one's own family in the greater context of nature's family-ness, with an interrelatedness that makes nature and family not one nor two identities; the realization confers an overall *relatedness* in the experience of either nature or family. The experience of either and their correspondence significantly influences the possibility for a complex biophilia whose understanding rejects as impossible and deranged the idea and practice of "conquering" or "controlling" nature. The conquering of nature would be, in effect, the same as conquering one's foot. The price paid by maintaining nature as "otherness," and the trick of thinking in a language whose declensions endorse dualism, is the perception of unity only through the disjunction of its components. Achieving separation between time and space and between humanity and nature results in a legitimated primacy of "humanity," and predisposes us to ways of understanding that disallow thinking outside the legitimated and established paradigms. They describe the predominant paradigm this way: "Science's basic strategy of making sense of the natural world is to break it up into conceptual fragments" (Suzuki and Knudtson 1992:63).

Their book serves to inspire an intellectual appreciation of how wrong has been the history of Western tradition in its relationships with whatever it has determined to be wild or "other." It details a plausible overhaul of curriculum to re-focus attention on what science has not understood, but it does not claim to recommend a way of returning to experience from thought; its authors simply point to the problem of imbalance.

Jerry Mander

Jerry Mander offers a comprehensive description, for environmental education, of an information-derived intelligence conceived solely within informational and technical experience:

> Television images define the terms of people's understanding, the boundaries of human awareness. Without an offsetting system of imagery in people's lives, television images take on a quality of reality that they do not deserve. The political consequences of such a situation, where a population becomes isolated within an artificial information environment, has been a favorite subject of many science-fiction writers over the years. George Orwell's *1984* describes an information environment so monolithic and aggressive that it became the total source and absolute limit of human knowledge. ... The effect of the total control of imagery was to unify mass consciousness within a single-media version of reality. With all information coming disembodied via the telescreen, and with the whole population receiving this monolithic information at the same time, and with no verifiable points of comparison, how was one to know what was true and real and what was not? ... Obviously, there are big differences between the scenario depicted in *1984* and present-day America, but as television-viewing statistics indicate, the differences may be less significant than the similarities. Television has become the primary world we relate to. ... For many people- especially heavy television viewers—life and television have already merged. (1991:133, 134)

Mander describes a contemporary dilemma as preface for his prescription to find meaning in First Nations wisdom. Television and information-indulgent nature programming in environmental education constitute the danger of the real, or nature, becoming important only as it is realistically unreal, as when it has been rendered into an image. When habituated to curriculum and social life in which the dominance of the technological milieu is a background, then a created verisimilitude of nature images can offer a sufficiently convincing illusion to seem to be an acceptable, or even preferable, substitute for authentic nature. If television becomes the source and limit of information, then media possess the potential for creating a hegemonic and homogeneous ideology both in the meaning and representation of nature. In creating increasingly hypnotic yet standardized versions of what nature is and means, television stultifies the diverse symbiotic relations between nature and culture and deprives populations of participating in the transactions of knowledge. It offers knowledge as a primarily technological rather than biological phenomenon. There is considerable potency as well in its ability to create images of nature that are not local and to favour what is telegenic. Television based environmental education never gets around to dealing with real trees because it creates ideal, artificial and imagistic trees that can only influence the meaning of authentic trees. Without grounding in nature, as Mander and I both have suggested, the engagement with artificiality can become primary and set an agenda that contradicts the aims of authentic environmental education.

When television elevates illusion to the status of virtual reality and truth, the telegenic becomes virtually real and compellingly true. Tragically, nothing is less telegenic than that which can not be said or seen. God, in any serious sense, makes for lousy television; nature, on the other hand, makes for superb television even if the images are routinely accelerated and selective, just as nature may be slow and collective. (First Nations storytelling traditions would probably escape television coverage as being too slow whereas dances would probably be favoured by camera and producer alike.)

Here I paraphrase and interpret Mander's compelling argument. Under this technological imperative the serious weakness that may befall First Nation's culture is marginalizing and making unreal their direct and spiritual relationship to nature. Fax, television, and electronic media of all sorts are highly effective in separation of nature from place. Transporting images from location to living room decontextualizes, just as storytelling contextualizes. If the aim of environmental education is the engagement and perpetuation of natural realities, then informational education has no place in the curriculum as an unguided force. The oral foundations of education as they relate to storytelling are essential, along with gardening and ecological restoration so there will be sufficient engagement and focal practice with the authentic so that engagement with the artificial and the device paradigm will be kept within limits. Information creates an artifice of semantic and mathematical realities not grounded in place and thereby establishes an electronic *nowhere* that is *everywhere* and they become of greater interest than the *somewhere* where one is and the *somewhere* one is watching. The danger this presents is inestimable. This is the essential contradiction, that estrangement begins and develops in the pursuit of authenticity.

However, Mander's treatise hugely neglects the scholarly literature surrounding both the philosophy of nature and of technology, and to the extent that it does so it is incomplete in its reference to the precedents of his argument. On the matter of placelessness, for example, he ignores Neil Evernden's (1985) standard reference work, *The Natural Alien*. Evernden describes the human condition as a state of homelessness requiring first, a phenomenological return to things themselves, and second, a condition of experiencing being which precedes knowledge. It is in this way that nature re-acquires the importance now accorded knowledge.

Mander's addition to the literature that appreciates Native culture, nature, and technology is original, important, and new; but the book, for all of its admirable sympathies, must admit to weaknesses. His argument against the seductions of the environment created by information and television should be contextualized in a discussion of prevailing concepts of mind, soma, frontier, and phenomenology. His treatment of Native North American tradition is secondary to the breadth of his treatment of the technological currents in "the postbiological age of nanotechnology and robotics" (Mander 1991:4). His work is a deconstructionist argument that addresses the pitfalls of the perceptual and conceptual habits inherent in the psychological and behavioral environments which media and technology create. It offers, as do I, a belief that Native North American traditions are those most worthy of emulation and understanding, as a resistance to the domination of the technical ethos.

He describes television's negative effect on storytelling and quotes Dene court reporter Irene Bjornson: "I learned a lot from TV and I learned a lot from white society too, but all the time I didn't learn anything about myself," (Mander 1991:110). He suggests, based on such observations as hers, that Dene "storytelling has virtually stopped" (1991:111). That observation, of course, is in stark contrast with Julie Cruikshank's (1990a, 1990b) ethnographic studies of active Dene storytellers. In spite of such premature mourning he recognizes two facets of the tradition, without recognizing the way in which story honors the ethic of conservation, or the unity of domains achieved through metaphor:

> The stories also embodied a teaching system. The old transmit to the young their knowledge of how things are, in such a loving way that the process will leave an absence of knowledge of Indian ways and thought, and a sense of worth in Indian culture.
>
> ...
>
> Even the most talented video makers find it impossible to equal what the imagination does with a story told orally. So the net result of translating stories to television would be too confining, and actually lessen their power, meaning and beauty. Audio tape or radio would be better. (1991:110, 111)

Mander's study takes a shotgun approach to the critique of modernity without doing a great deal more than supplying a comparative model that implies an agenda of imitation as an effective model for environmental change. The same argument was made by Ernest Thompson Seton, whom Mander never mentions. There is tremendous importance in developing clearly defined principles for settler culture to *be* in ways that are appropriate to, and with, nature. Being against "technology" per se is a first and predictable step but such a beginning must grow into a critique guided by nature. That critique would take him to the problems of dualism, and have him recognize that technology exists in nature. In placing so much of his emphasis on Native culture he neglects the immensity of the task of conversion, and also places Native culture in leadership capacities that are antithetical to the democratic fundamentals that are indispensable to a potent environmental movement. The undue pressure of responsibility this places on Native culture is unfair. It is possible to learn these lessons and get to work on saving ourselves. What next follows is a fine example of how.

Methods

Experience: Project Rediscovery

Respect and authority are hallmarks of Project Rediscovery, a series of locally-administered summer camps throughout First Nations lands. The camps accept young as well as adult students from every ethnic background, but principally attract participants from urban contexts.

The inexact classification of curriculum, along equally inexact divisions of story, myth, and scientific knowledge come together through experiential relationship with traditional material life in participation with the natural elements of place. This takes place with the participation of elders through every step of the activities, except for solo experiences such as overnight vigils and survival expeditions. The prerequisite experience of the physicality of nature and its mythic dimension is vital since storytelling accompanies each of the traditional activities undertaken. Thom Henley, has written of Project Rediscovery. His explanation of 12 aspects of Rediscovery so clearly addresses the issues of cross-cultural, Native-based environmental education, that I do no more than intersperse my comment with extracts from Henley's description of the project.

> Traditions of being in nature and living from the land have been distilled into the following principles recognized as the projects intercultural foundation. These principles are valuable to environmental education because of their ability to reveal at one level the validity of the experience of being in nature and in another domain to demonstrate the authority of oral tradition emerging from the experience of place. Together they can be seen as representing elements of the protocols required to understand how to live in sustainable relationship with the genius of place so that the learning taking place therein will be regenerative, self organizing, and symbiotic of a human presence.
>
> 1. Homeland, Heartland
> In keeping with native traditions, contact with the land is the most important aspect of Rediscovery. All benefits and personal accomplishments are ultimately linked to this relationship. The participants are gently encouraged to notice their surroundings, and to become involved in the world around them. No one is ever forced to spend time alone in the wilderness. No one is ever coerced into appreciating a sunset or a star-filled night sky. But considering the

> settings of the camps— alpine meadows, desert dunes, and sandy Pacific beaches—the influence of the natural world is ever-present. (Henley 1989:28)

The intended effect of this proximity is to delve deeper into its workings to understand the workings of self and place as integrated. He adds:

> On Rediscovery, the wilderness is homeland, not frontier. It is the place from which sustenance is taken carefully, natural resources treated with the knowledge that future generations will also depend on the earth. Instead of reacting with a fortress mentality to wilderness, creating barricades, and destroying anything unfamiliar or wild, staff and participants try to live with and have respect for other living things. (Henley 1989:29)

> 2. Living From the Land
>
> On Rediscovery lunch may begin at dawn, with early risers taking advantage of low tide to search for octopus. They must find the octopus lair, pry the eight-armed creature from its hiding place, kill, gut, clean, tenderize, and finally cook and serve their catch. Lunch may resemble a hot-dog (an octopus arm on a bun) but the whole relationship with the creature being consumed and its connection to its environment could not be more pronounced. There is a saying, "when the tide goes out, the table is set." Halibut, cod, salmon, trout abalone, mussels, clams, oysters, crab, rabbit, porcupine, venison, wild greens and berries all are eaten in their proper setting. There is one simple but effective rule governing their use: if you kill it, you eat it and fully utilize it. (1989:29)

The intended effect of this is to point out that, "food gathering must be governed by principles of conservation and stewardship for the local environment. This doesn't come naturally to children and must be emphasized." (1989:30)

> 3. Extended family
>
> By keeping the number of participants small, eleven to sixteen per session, there is always a sense of family intimacy, and a good ratio of staff to youngsters for guidance and counselling. Each group includes boys and girls of many ages, ranging from eight to eighteen years old, native and non-native youth from diverse socio-economic backgrounds, creating a social microcosm of the local community. Within this extended family, space is reserved for elders and two or three youngsters from the community. Just as with any functional family, everyone prepares and eats meals together. (1989:31)

The idea here is to teach community practice through the integration of all ages in chores and learning

> 4. Elders
> Native elders naturally assume the respected head position of a Rediscovery extended family. The original organizers felt that the elders would benefit the program most through theirs songs, stories, crafts, and skills. In addition to this, the elders have proven to be the program's most effective counsellors, transcending any generation gap between themselves and the coolest of teenagers. (1989:33)

The reason for bringing together the generations is sacred and self evident but also helps to critique the effect of technologies on community.

> Many native elders concede that they cannot compete with television, video arcades, pool halls, or other town distractions. A drum song or traditional legend may appear dull or old fashioned to a youngster hooked on the electronic wizardry of a rock video. But remove that same youngster from distraction, and set him or her beside a wilderness campfire, and an elder now has a totally captive audience. The firelight works its magic, the uncommon darkness triggers the imagination, and the voice of the elder has a power no television saga could ever convey, forging a living link with the past. (1989:34)

The possibility for cross-cultural understanding is at least initially thought to be circumstantial: "Rediscovery brings people together from many different racial backgrounds, people who might otherwise never talk to each other, much less share the same tent or dinner table. At Rediscovery they live in an isolated wilderness environment in which they are interdependent" (1989:35). This tolerance and cooperation extends to the symbolic as well as material life of the project:

> 5. Cross-cultural Understanding
> From the tradition of passing the eagle feather, I learned something quite unexpected and very important. During the first few times the feather was passed, I became aware that my impulse was to fill up the silences while people searched for words. I wanted to put words in their mouths or make bantering jokes when they hesitated. Partly this is a personal response. I have always enjoyed eloquence and richness of words. But I also think this is a response which is typical of white society. We would rather tell than listen, and we are nervous with silence.
>
> ...
>
> I realized I had listened to people without hearing them. My mind was racing ahead, searching for words. I was missing the silences and the important words which came out of them. One of the greatest treasures Rediscovery has given me is the new awareness of listening and respect for silence. (1989:36)

The issue of what constitutes an appropriate duration for rediscovery of the importance of these principles is discussed:

> 6. Flexible Schedule
> Two-week sessions for teens and ten day sessions for pre-teens have proven the optimum time frames for the Rediscovery experience. Most camps are so isolated that participants get homesick during longer stays. Conversely, short camp sessions do not allow time for the discoveries which can take place within oneself, between cultures, and intimately with nature. The main events of any two weeks are usually an expedition, a Solo/Vision Quest, and a Feast and Ceremony Night. (1989:37)

Rigidity and mechanistic graduation through these activities is rejected as antithetical to the development of questions and protocols. Henley says "The secret to a successful experience is knowing when to let go of the schedule" (1989:38).

The sharing of feelings is seen to be fundamental to the success of connection to place and community and in developing a sense of extended family. Henley describes activities to foster and promote and reveal these connections.

> 7. Sharing, Speaking Out
> Many activities have no other aim than to encourage children to share their feelings. Eagle feathers, wooden staffs, crystals, and other special objects are passed from person to person around the campfire; only the person holding the "talking" object can speak. ... Participants also share and express themselves through dance, song, play, and storytelling. (1989:38)

Place is intractably connected to these activities. Henley describes this connection:

> Nature acts as a catalyst for self-expression, and is the ideal place to share thoughts with others. Once a rapport has been established between young people, and a young person realizes that what he or she feels is important, that sense of self-worth and trust will carry back to the community. (1989:39)

The development of an understanding of the interconnection between spirit and place and self is described by Henley:

> 8. Personal Achievement
> The following Rediscovery soloists had different experiences when they spent their twenty-four hours alone, but both overcame obstacles: one physical, building a fire with two matches; the other mental, staying out on the solo without a fire after the matches were gone. Achievements, small and large, do not slip by unnoticed on Rediscovery. (1989:39)

Add to this sense of personal achievement, a community-wide honoring of the participants in solo expeditions, and there is an inescapable impression that participants are treated with individual respect and collective equality. This has carry-over into social life, as Henley describes:

> When The Solicitor General of B.C. and the Solicitor General of Canada released funds for the first Rediscovery Project, one of their main concerns was the high juvenile crime rate in one of the communities on Haida Gwaii. (Out of a population of 1500, more than fifty young people were on probation.) Rediscovery is designed as a wilderness adventure, not a corrections camp. Everyone who participates does so because they want to, not because they have to as punishment. As with any wilderness adventure, milestones are encountered: having to wash clothes in a bucket or wading across an icy mountain river. As the participants surpass each milestone, they receive recognition for their accomplishments. According to the Solicitor General ... these methods are working. (1989:42)

9. Healthy Living

A vigorous exercise regimen is maintained including running, food collection, healthy eating, and much time in the fresh air.

10. Leadership Skills

In Henley's words, "Staff are trained in a variety of areas: navigation, map reading, compass work, first aid, native technologies, peer counselling, bush survival, and many other leadership skills" (1989:43). There have been enough graduates of the project to have returnees who wish to come up through the ranks to become guides. In becoming guides they assist and lead area tourists to understand and protect the ecological balance.

11. Further Education

In stating another principle, Henley makes a negative judgement. "Rediscovery leaders have one natural advantage over schoolteachers: the outdoor setting" (1989:45). He suggests that learning nature on its own terms in its own place offsets the ennui of the classroom and he describes this technique by saying "Environmental and cultural learning is taught using immersion, observation, exploration with all senses, and finally appreciation" (1989:45). Henley sees that the Rediscovery Project is meant not to replace but to complement existing education, without formally suggesting the superiority of the experiential.

12. Follow-Up

Henley concludes the principles by describing the popularity of this educational model with participants who wish to attend a similar year-round facility on the land. He writes:

> Having been exposed to the wilderness, many teenagers find their way back to the land—camping with friends, or getting food with their families. Rediscovery becomes an important stepping stone in this process. (1989:46)

The recognition of the importance of the land is understood as essential but there is also the understanding that the way the land is learned is vital. This is why there has been a follow -up program developed so that elders and participants can remain in touch throughout the off-season, through visits and dances, so that cultural lessons and activities that have been learned are able to be honed.

The depths of these ancient traditions may not be realizable in this writing but their common sense is obvious. I believe the common sense is what we in settler culture must be committed to in order to become prepared for the understanding of how these principles resonate among domains.

Stories: Keepers of the Earth

Michael J. Caduto and Joseph Bruchac (1988) act upon their realization of the superiority of story as an integrative discursive tradition. They describe at least two interconnections that will assist in understanding the primacy of nature. Story brings a critical and local perspective to discussions about such things as sustainability, the "Environment" versus local "environments," etc.:

> Stories form a link between our imagination and our surroundings. They are a way of reaching deep into a child's inner world to the places where dreams and fantasies are constantly sculpting an ever growing world." (1988:7)

and stories are engaging in a way that no other medium or genre can be:

> Tell a child a story and they listen with their whole beings. (1988:xxiii)

Listening with their whole beings can be taken to mean that they are experiencing and making meaning of the land. The thing about this that is magnificently subversive for environmental education is Caduto's and Bruchac's implicit proposition that local place is that which is indispensable for the completion of thinking in and with stories. Thus a renewal of storytelling following Native principles becomes fundamental to growing up and growing a resistance to any force that seeks to transform or exploit place in ways antithetical to Leopold's ethic.[7] Though Caduto and Bruchac are focused on story as vehicle rather than as construct symmetrical to nature they discuss the principle of *being*, a principle that is valuable to environmental education:

> The primary object of the story is the realization of wonder and delight.
>
> ...
>
> In effect, the storyteller says to his listener, "In my story I determine you; for a moment-the duration of the story-your reason for being is

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[7] "A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise." (1952:224, 225)

> the story itself; for the sake of the story, you are. In my story I create a state of being in which you are immediately involved." (1988:xvii, 1)

Their appreciation of the rootedness of domains in everyday reality does not tie them to a unidimensional usage for story. In fact they demonstrate the interconnection of domains:

> Words are true to human experience. Indeed the truth of human experience is their principal information. This is to say that stories tend to support and confirm our perception of the world and creatures within it. Even the most fantastic story is rooted in our common experience.
> ...
> Stories are made of words and of such implications as the storyteller places upon words. Words, then, are the primary tools of the storyteller. It is to his purpose to use words well.
> ...
> "Who are you ?," someone asks.
> "I am the story of myself," comes the answer." (1988:xvii)

For the purpose of environmental education, these guides to Native stories are better than text collections because they demonstrate principles within the telling that are vital for settler culture to use in making their own stories. This collection is to be recommended as a solid introduction to the relationship between story and place. A subsequent project by the same authors (Caduto and Bruchac 1991) deals specifically with animals. In it they describe the traditional relationships to animals in Native culture. Appreciating the complex tradition behind this relationship they have critiqued conventional educational approaches:

> Most probably we get most of our knowledge about the world we live in from our surroundings, although, we like to pretend that, with our great colleges and universities, our massive libraries and complex, computer retrieval systems we have more access to information than did people of earlier times. The immensity of the data available to us poses a problem. How do we make this information our own in the sense of using it in a practical manner? Here we lag far behind all previous societies and may indeed be abstracting ourselves from that natural world to an alarming and self-threatening degree. With some rare exceptions, would or could any of us survive in a wholly natural setting? Or are we condemned to remain restricted within the artificial institutional universe that we have constructed." (1991:xvii)

Recognizing the artificiality of the "educational" approach to animals, they discuss the necessity of experience as primary to any lasting symbiotic sense of the importance of story and animals alike:

> Our knowledge of birds, animals, and the natural world, when we have any ideas about them at all is derived primarily from television,

> textbooks, and unfortunately from cartoons that feature cuddly and all too human bears, energetic roadrunners, and inept coyotes. Other than in a petting zoo at supermarkets and roadside cages, few of our children ever see animals, and they never see them in their natural habitats. Animal stories, therefore, are fraught with the possibility of misunderstanding unless some effort is made to provide a context in which the stories take place that is true to the natural setting and behavior of animals. (1991:xvii)

The intercultural dimension of the importance of animals in the mental life of Native North Americans is summarized as an example of the place of mind and technology in the natural order:

> Native North Americans saw themselves as participants in a great natural order of life, related in some fundamental manner to every other living species. It was said that each species had a particular knowledge of the universe and specific skills for living in it. Human beings had a little bit of knowledge and some specific technological skills necessary to survive and prosper. Man was the youngest member of the web of life and, therefore, had to have some humility in the face of talents and experience of other species.
>
> ...
>
> Native North Americans made a point of preserving the other creatures and in modelling their own behavior after them. Many of the social systems of the tribes were patterned after their observations of the birds and the animals, and in those tribes that organized themselves in clans, every effort was made to follow the behavior of the clan totem animals or birds. Teaching stories for children emphasized the virtues of the animals and children were admonished to be wise, gentle, brave, or cheerful in the same manner as certain birds and animals. Some of the tribes even developed a psychology of birds and animals describing human personality traits as being similar to those of coyotes, beavers, elk, bears and so forth. (1991:xvii)

They recognize the importance of developing totemic identification as a source of lasting identification of ways of knowing and being:

> These psychological descriptions are amazingly accurate in terms of predicting individual behavior and frequently surprise casual observers. The technical skills of birds, animals and reptiles were such that native North Americans could take clues from them for their own welfare.
>
> ...
>
> Tell children a story and they listen with their whole beings. Lead children to touch and understand a frog, listen to a bird's song and the see the flash of its wings as it darts by, taste and smell a bee's honey and discover the tracks of a wild animals and you begin to establish conversations between children and the animals in their

> surroundings. Have them listen to and look at a cricket, feel it, study the way it lives, how it creates its song and what the song communicates to the other crickets. Help them to understand how the cricket is a part of a field or vacant lot community of plants, animals, rocks, soil and water all fuelled by the plant growing energy of the sun. (1991:xvii)

How this develops a better and holistically sound environmental intelligence compared to that of information is described:

> As the stories unfold and you help the children bring the activities to life, a holistic interdisciplinary approach to teaching about the animals and native North American cultures begins with their close ties to the animals and all parts of Earth, native North American cultures are a crucial link between human society and animals. The story characters are voices through which the wisdom of native North Americans can speak in today's language, fostering listening and reading skills and enhancing understanding of how the native peoples traditionally live close to the animals. Each story is a natural teaching tool which becomes a springboard as you dive into the activities designed to provoke curiosity among children and facilitate discovery of the animals and their environments and the influence that people have on those close surroundings. Pedagogically sound, these activities have been extensively field tested. They involve the children in creative arts, theater, reading, writing, science, social studies, math, sensory awareness... The activities engage a child's whole self: emotions, senses, thoughts, and actions. They emphasize creative thinking and syntheses of knowledge and experiences. (1991:xvii)

The solidarity with the natural world that is to emerge from *being in* story and place simultaneously is assumed to be very direct and immediate. They have missed an important aspect of time and development but have sensitively described how to think with place:

> Native North Americans see themselves as part of nature, not apart from it. Their stories use natural images to teach about relations between people, and between people, animals, and the rest of the earth. To the native peoples of North America, what was done to a frog or a deer or a tree, a rock or a river, was done to a brother or a sister. This perspective has important implications throughout this book where it deals with endangered species, wildlife, stewardship and related environmental patterns and solutions. (1991:9)

Bruchac and Caduto have offered a comprehensive installment in the alignment of multiple tribal Native storytelling traditions with environmental education. This frequently structures the book with stories preceding historical explications of its elements. For example, the text "The Passing of the Buffalo" is followed by a historical explication of the ecocide practised on the bison by the buffalo hunter. (1991:223-225) It is particularly enlightening to notice the proportionately larger discursive at work in explaining the story.

Summary

It would be inappropriate to characterize any of the illustrations in this paper as being predominantly romantic, alienating, or integrative, because all of the examples could be evaluated on all of the axes. In fact, there are probably aspects of all those issues in each one of the examples. The point of the illustration is to demonstrate the issues as axes for description of how environmental education has dealt with First Nations ideas and people.

What is illustrated first, I believe, is environmental education's racist ignorance of a knowledge base that has been here for tens of thousands of years. Second, and somewhat more encouraging, is the recognition that that knowledge, on its own terms, is accessible and potentially informative for environmental education. A third illustration is that First Nations peoples themselves are making their views known, without intermediaries and without interpretation.

Five general issues were raised at the beginning of this discussion:

Authority. Representations of First Nations thought are accurate representations only insofar as they are validated in terms of the cultures which they purport to describe. In "cultural" terms, an individual cannot purport to represent teachings or to explain cosmological principles without the authority to do so. In environmental education anyone who professes to give the definitive word on how Indians think about the environment is probably not speaking with authority. That authority is not general, but is particular to case. Mechling (1978) describes an instance that could probably be characterized with respect to "authority": the "Koshare" tribe of Indians who performed "Indian" dances for tourists were actually, modelling themselves on Seton's imperatives, a group of white Boy Scouts from LaJunta, Colorado. (I say "probable example" because I do not have the cultural authority to pass judgement, but it seems quite unlikely to me that such a group would in fact have been sanctioned in a First Nations culture.) That example is a good one to extend to the next two issues, appropriation and romanticization.

Appropriation. When First Nations premises, ideas, practices, and so forth, are represented without authority, they can be said to be (mis)-appropriated.

Romanticization. This is a peculiar kind of appropriation, because it attributes an ideal quality to First Nations; as ideal, it removes First Nations peoples and thought from the realm of the real and living. Of course it trivializes First Nations people and things.

Alienation. This can be understood in psychological, political, rhetorical, social, and abstract terms. Alienation means disjunction and separation between

First Nations and others. Though two of its early exponents founded their environmental message on First Nations definitions—as they appropriated and romanticized them—I believe that it is demonstrable that the environmental education movement has deemed First Nations knowledge and perspective to be adjunct, dissociated, peripheral, i.e., alienated, from the movement. That is the reason for the call by Suzuki, Knudson, and Mander, to look seriously at how American First Nations knowledge might inform environmental thought.

Integration. This word has several meanings. Its first intention in this discussion is one of recognition of the integrity of components—recognition that a component is an integral part of the whole: First Nations' perspectives on the environment must be integral to North American environmental education because without those perspectives on this place we ignore tens of thousands of years of development of an environmental ethic that is specific to the places in which we live. The second meaning respects the integrity of First Nations ethos, so "integration" implies a recognition of First Nations authoritative principles, without appropriation, romanticization, or alienation—that is, the recognition of First Nations environmental thought on its own terms. It is not something that we "use" to develop a North American environmental education and environmental ethic, but a vital, foundational ethic, that is resonant with meaning for us all.

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CHAPTER VI. WILDERNESS AND STORYTELLING[8]

Cree Elder Raven Mackinaw said "Wilderness and storytelling are the same thing."

This is an exploration of that statement. To begin the exploration, I looked at the history of the development of the concept of wilderness in Western thought, simply to find out what the term has entailed. I discovered that after classical times, the concept has almost always involved a definition of "the other," in which wilderness and nature are distinguished from humans and human processes.

To explore the identity of wilderness with storytelling I have looked to two writers about Cree and Saulteaux tradition and story, Walter Lightning and the late Linda Akan. Two anthropologists who study Northern Dene and Western Apache storytelling provide perspectives on storytelling and its identity with place.

A word of background is in order about the motivation for this exploration of the implications of Raven Mackinaw's statement. Though I do not develop the connection in this piece, I hope to find how the statement of equation might inform the practice of environmental education.

Wilderness In Western Thought

The concept has a long history in Western thought, and it has always been associated with the concept of nature. It has not always implied dualism. It is interesting to look at the concept of nature with respect to European ideas about America and its inhabitants, particularly in a discussion motivated by the statement of a Plains Cree Elder.

Dualism

The Western concept of nature has not always configured a dualism of nature and culture, mind and body, and civilization and wilderness. In his classic *Idea of Nature* (1960) R.G. Collingwood describes historical stages of thought concerning nature. The Greek concept of nature, as Collingwood describes it, had an affinity with the modern deep ecology movement in the sense that nature was conceived of as permeated by "mind," and it was "mind" which provided nature's "order and rationality" (Collingwood 1960:3). The mind (or intelligence) which the ancient Greeks ascribed to nature was not exclusively human but was a "rationality" that *all* of creation understood. Natural intelligence possessed multiple forms which allowed for local differences in land as well as inhabitants. Collingwood says of that concept that "the local is a specialized organization of this all-pervading vitality or rationality" (p. 3). Hayden White (1972:9) describes that aspect of classical Greek and Roman thought as a relationship between fact and principle: "that humanity is experienced as diversified in fact, though united in principle."

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[8] A version of this paper was presented at a meeting of the Society for the Interdisciplinary Study of Social Imagery, Department of Sociology, University of Southern Colorado, at Pueblo, Colorado, in 1992, and published in the refereed proceedings of that meeting.

In the context of this integration of land, humanity, and cosmology there was the conceptual possibility for a solidarity and kinship amongst individual intellects, including the intellect of land. Oelschlaeger (1992), recounting the development of the idea of wilderness, cautions against assuming that this idea of wilderness was developed, new, in classical thought. In *The Idea of Wilderness* he implies that these relationships—particular with general; fact with principle; local, specific, and observed, with cosmological, general, mental—are the classical Greek and Roman end-points of an historical development of thought and feeling stretching as far back as the Paleolithic, and so he would begin by dealing with the contributions of prehistory as foundational of the concept of wilderness: "It is a mistake to neglect...the immense journey of the homo sapiens that conditions all thought about the wilderness" (p. 359).

As classical Greek cosmology waned in influence, seeds of hostility toward the environment sprouted. These fundamental changes are exemplified by Schneidau's contention "that the sense of history that virtually defines the West originates in the sacred discontent...the demythologizing of mythic consciousness" (Oelschlaeger 1992:358). The cosmological equity that in Greek culture saw relations between all things gave way to an elevation of human concerns over those of local and cosmological nature and the intelligence of local land.

The transition from Greek cosmology corresponded with the rise of what Roderick Nash (1973:ix) describes as "the conception of wilderness as a state of mind rather than an actual place." He summarizes the major change in conception of wilderness by saying that "the emphasis" changed to become "not so much what wilderness is but what men think it is" (p. 5), and he contrasts that idea with the recognition attributed to Standing Bear, "there was no wilderness; since nature was not dangerous but hospitable; not formidable but friendly," (Nash 1973:xiii).

The change in perspective was enormous: the idea, rather than the experience of wilderness, provided European cultures with a conceptual distinction that made the relationship with nature disjunctive and provided a concept of a wilderness that was equally dissociated: a basic definitional component of wilderness was "other(ness)."

In distinguishing a concept of habitat from a concept of land, Oelschlaeger discusses two material bases for the distinction of wilderness from non-wilderness. First, "the move into history and into town was at least partially a rejection of habitat," (p. 167). Second, in the transformation of the past into a place, there arose the concept and practice of holding property, and with that concept technological and cultural practices may have endorsed a concept of "land," transmuted from an "earlier concept of habitat" (p. 167). The creation of "wild" was thus, according to Oelschlaeger, an outgrowth of the rise of the domestic and agricultural settlement.

With the decline of classical influence, the rise of a distinction between "wild nature" or "wilderness" on the one hand and "domestic" on the other fragmented a unity that had been elemental in the human concepts of place and cosmos.

The Renaissance view of nature, described by Collingwood (1960:4) as having developed in the 16th and 17th centuries magnified the idea of human separation from nature and wilderness: "The Renaissance view of nature or wilderness" he describes as "devoid of life and intelligence." The Christian theological legacy of "the howling wilderness of the Israelites" and "the fall," as described in Genesis 3:17-19, reinforced an association of wilderness with evil and with divine displeasure. The Protestant Reformation was coincidental with Renaissance humanism, and with it the idea that anyone should be able to understand the depths of theological truth as that truth was increasingly legitimated as a printed phenomenon. These ideas were concomitant with the rise of the nation state, in part due to the influence of the printing press on increasing legitimation of several national European vernacular languages.

The European Renaissance was coincident with a major phase of Europe's age of colonization, and the "New World" could be defined in terms of wilderness. The continents of the Western Hemisphere offered not only a huge and awaiting resource for the plundering but for a more clearly "human" use. The "clear sunshine of Gospell" was pitted against the "thick anti-Christian darkness" (Nash 1973:36). The imperative to subdue the darkness of evil and to exploit a transformed wilderness to "good" and "human" ends meant "progress." In that conception of things, nature was not seen as a self-organizing and autonomous process but as a "product designed by an intelligent mind outside itself" (Collingwood 1960:5). Based on a mechanistic analogy, rather than an organic one, this new viewpoint obviated any idea of "mind in nature" and made "mind" clearly separate from nature. "Mind" was a property of humans, and nature became utilitarian, a resource for the manufacture of human things. Humans could improve on nature. Knowing self could not be the gateway to knowing nature, since the philosophical emphasis established the new coordinates of "ethics, logic, and thereafter a theory of mind" (p. 5) as predominant interests.

In the establishing of the dualism of myth and history, mind and body, nature and culture—and thus an ideology of a separable, transcendent, and omnipotent human intellect—a principle arose which by the 18th century created what Collingwood (1960:4) describes as the central concern of Berkeley, Kant, Hegel, and Hume: "how can mind be related to that which is alien from it—nature?". Collingwood (p. 4) conflates their collective answer as, "mind makes nature, so to speak, a by-product of an autonomous and self existing activity of mind." Clearly, the idea that the mind *is* nature had lapsed to the point where Hegel could claim "that the material was a mental characteristic" (Collingwood 1960:6).

Collingwood (1960:4) summarizes the distance between the Greeks and the emerging view in saying "nature goes from being a manifestation of a greater being to being an inventor of what it is not." The evolution of settlement and increasingly logocentric conceptions of reality created a division of the world: first, there was a civilized, ordered, and domestic, from which developed a designation of "wild" as a past habitat from an associated "primitive" stage of being.

With this separation grew a "tendency to reduce external attributes to the status of a moral condition" (White 1972:11). "Civilized" Europeans were the undisputed leaders while the God-cursed wilderness and its denizens occupied a subhuman level. This division was accomplished first by a belief in a rationality that New World settlers assumed neither land nor its "primitive" inhabitants could possess, and second by an associated belief that cultural differences were essentially "metaphysical and moral," because of the biblical origin of the division between "damned and saved" (White 1976:10).

The Renaissance concepts of "humanity as a model of rationality and morality" and "the new world as the site for the unfolding of God's plan" made it possible to attribute a hierarchy of worthiness between peoples. There were winners and losers. There was a new sense of what was morally correct; what the settlers deemed to be aboriginal non-exploitation of land could be counted by the settlers as slothfulness. The Creator had made the earth so that humans could use it to the glory of God. Time had an ending—the second coming of Christ—so it made perfect sense to use the earth's resources for "human betterment."

Thomas Aquinas' lengthy discussion of the differences between the potential salvation in the human soul and the unreasoning soul of the animal provided license to "do what you want to them" (White 1972:19), because all other species were subhuman. The aboriginal American fit into this scheme: rather than being seen as having responded differently to the land, the Indian was closer to the devil, the medieval wildman, or the animal, than the more perfectly human European; the Indian may even have been beyond salvation. The 16th century papal decision that Indians had souls notwithstanding, the conception of their worthiness did not generally accord them equal status with Europeans. Hayden White expresses the logic thus: "They (settlers) were certain that man could reach his highest potentialities in only that sort of society which they had left behind them in England" (White 1972:3).

Thus the "Englishman, in looking at the Indian knew he was looking at himself" (Pearce 1953:3), but unredeemed and fallen; and also knew that the "Indian was an impediment to civilization and was in the grip of devilish ignorance" (p. 8).

This conception was completely counter to one shared by Native cultures, described by Vine Deloria Jr. (1973:99): "The task which tribal religions have seen is that of relating the community of men to each facet of creation as they have experienced it." Europeans could comprehend indigenous conceptions of relationship to land, they thought, but they accorded that concept's worthiness to be in its example: the identification of a solidarity with the Earth, a theme echoing throughout the recorded history of indigenous oratory, could be seen by Europeans as

> evidence of a Satanic opposition to the very principle of a divinity. In a world in which the divine plan was so clear, in a world through which the Bible would guide all men in all things, in a world in which civilized and divinely illuminated human reason led to count for everything, the Indian might well be a terrifying anomaly, at best a symbol of what men might become if they lived far from God's Word. (Pearce 1953:21)

Any war on the Indian was something of a divinely sanctioned pogrom to extinguish, on the one hand, and to civilize, on the other. Europeans were, in Pearce's words, "less interested in the Indian's culture than in the fallen spiritual condition which that culture manifested" (Pearce 1953:25). The devastating consequence of European disease introduced into the Americas in the 1500s was that as much as 90% of the aboriginal population died off (Dobyns 1976). Early 17th century English settlers in New England saw the effects of that population decline and could assume that it signalled a divine plan: the wilderness of the new world was being prepared for its more worthy inhabitants. The continental cleansing that took place between 1608 and 1918 had some of the elements of a jihad. The settler could have contempt for the Indian relationship to land and for Indians' disregard of the bible in favour of loyalty to "myth." Pearce writes,

> Puritans carried the logic of 17th century Christian imperialism. God had meant the savage Indian lands for the civilized English and, moreover, had meant the savage state itself as a sign of Satan's power and savage warfare as a sign of earthly struggle and sin. (Pearce 1953:20)

For the settler and frontiersperson, the "otherness" of the wild was its strangeness, its darkness, its being so unlike where the settler had come from, that European place of departure having supplied the model for what was being erected as American civilization.

What has been so misguided in this still-present concept of wilderness is an assumption whose nakedness shies at examination. Believing primeval land to have not been properly-utilized human habitat is a posture that suggests an identification between "culture" and "civilization" so strong as to preclude consideration of the possibility that human societies could happily exist without erecting architecture and beliefs which defied the terrain. Living lightly and cooperatively with their locales, natives embraced the integration of the human with the natural, and so avoided the mesmerizing and ultimately toxic dualisms which were founded on rejection of mind from nature and settlement from habitat.

The affinities between the Greek cosmology and indigenous conceptions of nature are evident in their rough agreement on the intelligence of the organism of nature and the belief that "everything participates in the greater order to the extent of their ability" (Collingwood 1960:6). Integral to both Greek and indigenous concepts of a pervasive intelligence, greater than the sum of its parts, is the acceptance of a multiplicity of manifestations of that intelligence. The physical reality of the earth and the elements in all of their forms is a representation of intelligence; so too is a not-normally-perceptible realm which in both microscopic and gigantically macroscopic terms permeates all of nature.

Neither classical nor Amerindian points of view will permit Renaissance dualism or opposition, since such disjunction possesses no place in the correct order of nature. A nature-culture dualism preserves the idea of a separation and opposition, and the outcome of maintaining such a dualism in thinking can only deepen both the conceptual and immediately-physical ecological problem. Compelling evidence suggests that humanity and planetary diversity are running out of time for such fundamental errors, and for that reason it is vital to turn to the phenomenological and epistemic traditions of the native peoples of North America in order to begin even to conceive of how one would go about nurturing a cosmological view modelled on the integration of the ecosystem itself. Finding out what Raven Mackinaw means when he says "wilderness and storytelling are the same thing" may be a place to start. We might begin by exploring some of the conceptual stuff that inheres in the European concept of wilderness.

Beyond Dualism

Dualism in Attributions of Wilderness

We have seen how a Western interpretation of Jewish and Christian scripture was used for sanction and imperative for exploitation and transformation of specific places thought to be "wilderness," and for justifying a morality that assumed a moral hierarchy amongst specific groups of people, based at least partly on relationships to land. Those concepts are part of an intellectual and social history of the West. In intellectual and scientific thought, late 19th century doctrines of biological and cultural evolution replaced those ideas, though government policy and Euro-American public attitudes may still have incorporated the older morality. Carney (1971, 1981, 1991), for example, with comprehensive and detailed archival reference, has argued that apparently haphazard and ad hoc government and church policy concerning education for First Nations peoples of the Northwest Territories got its coherence in fact from an unarticulated but implicit assumption which he called the "Native-wilderness equation": Natives were considered to be a part of the wilderness, and schooling for them was structured to make them an exploitable wilderness resource.

During the past 150 years, intellectual discourse about human nature has been secularized. Old assumptions about divinely-ordained political and cultural hegemony of Europeans have been replaced by doctrines of cultural relativity, by a doctrine of the natural moral equality of humans which provides an imperative for political equality, and by materialist interpretations of historical evolution. For a while, God's place as motivater was taken over by a materialist dynamic, from which inevitable stages of cultural evolution led—for some—to "civilization."

The legacy of the dualism of "human" and "other" is still with us in most modern conceptions of "wilderness." The Western concept of civilization is maintained but cultural relativism, now, does not allow a moral categorization of peoples based on technology or presumed evolutionary stage. Though it is now impossible to categorize peoples and societies with those distinctions, it is common to categorize places on those bases. Describing a place as wilderness retains something of just such categorization with respect to place, and most particularly as people relate to place.

Our conceptions of wilderness seem always to invoke dualism. The question "what is wilderness?" invokes distinctions between what it is and what it is not, i.e., it is often defined with reference to something else. Some of the dualities, expressed in terms of pairs of oppositions, are based on the following distinctions. The second part of each set of oppositions is associated with attributions of wilderness, and the first part with "non-wilderness."

1. human vs. natural
2. human behaviour constrained by social dynamics and codified laws vs. human behaviour constrained by natural dynamics and natural "laws"
3. developed, technologically acted upon vs. undeveloped, natural
4. mediated experience, symbolic representation of environment vs. unmediated experience, the environment is simply there, and speaks for itself (e.g., in "communication with nature")
5. exploited and used (e.g., place as "resource" containing "resources") vs. unexploited (place as simply place-in-itself containing things that are integral to the organization of the place as a unity)
6. complex but finite extrinsically-attributed hierarchies of categories vs. infinitely more complex intrinsic hierarchies of categories
7. connections between things describable in functional terms vs. connections between things describable in organic terms
8. manifest vs. liminal

The object here is not to provide a definition of the wilderness concept, and so to relate each of the dualities noted above, but to exemplify a process of definition based on exclusive dualities. The distinctions above appear to be in irreconcilable opposition. They are, by definition, mutually exclusive. They include a primary, fundamental, and basic disjunction between "human" and "other." Wilderness is in the realm of the "other." Technology, mediated experience, exploitation and usage, constraint by social dynamics and laws, extrinsically-motivated and manipulable categorization, and functionality, are all associated with "human."

Is Dualism Inherent In Storytelling?

How can storytelling be the same thing as wilderness? The possible dualities that the concept of storytelling invokes are not comparable dualities.

There is the duality of storytelling vs. lived experience. That pair cannot be maintained as a mutually exclusive duality because one of the pair incorporates the other: storytelling is an experience; lived experience incorporates storytelling.

There is the duality of storytelling vs. listening to stories, but while those might appear to be mutually exclusive, they are not because one is the product of the other: storytelling is the product of listening to stories. Both listening to stories and telling stories are processes that, in performance and attendance, create a unity, so there is no necessary mutual exclusion of the processes.

There is the duality of storytelling vs. the telling of something else, but that takes the focus off the identity of story with wilderness. (It also invokes the necessity to define a boundedness, a definition, for "story.") The presumed duality is in fact a question of genres, not a duality but a categorical choice from a number of possibilities.

And finally there is the duality of storytelling vs. story writing and story reading. The possibility of mutually exclusive categories with that pair is so compelling a duality that I explored the connection of orality and literacy in two works (Sheridan 1990, 1991).[9] The problem is that story writing and story reading are possible ways of participating in storytelling, so the presumed duality is in fact a question of medium.

Describing Wilderness In Terms of Process

It may be possible to find definitions of wilderness within Western (i.e., European) culture that do not invoke dualities. Perhaps one of the best ways to do that is to ask "what are the processes that produce the duality?" or "what is the context in which the terms make sense as dualities?". A specification of the context should imply the processes that take place within that context that give rise to the duality. For example, one of the broad contexts in the list of attributes, above, is "human behaviour." The dualities listed above suggest that some of the domains in which the dualities exist might be named as (a) the domain of space and location; (b) the encompassing domain of cosmology: how do people think of the way the universe is, and came to be; and (c) the domain of human action. All of those dualities can be expressed in terms of these three broad domains, which appear to be necessary (though not sufficient) to describe what wilderness is. The domain where *process* must be invoked in definition is in the third of these observations.

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[9] In Sheridan (1990) I noted that Ong's (1986) attributions to oral and preliterate minds were applicable as well to the science employed in the description of ecosystems. In commenting on that symmetry I followed others in the assumption that the medium, orality or literacy, determines cognitive processes. In Sheridan (1991), on the significance of silence in oral cultures, I argued that the greater value placed on silence in such cultures was influenced by the cognitive hyperactivity that the alphabetization of consciousness entails. Those papers appear as Chapters II and III of this thesis.

1. *Wilderness is a place.*
   It may be defined topographically (though in some current Western thought, by defining it—by "knowing" it—some of its qualities as "wilderness" might be compromised). Notwithstanding discussion of wilderness as metaphor (or metonym or synecdoche) as in describing a "cognitive" wilderness, its first referent is indisputably place, and any metaphor rests on the surety that "wilderness" is a spatial, topographical, physical reference. There is no dualism here. The reference to place may be specific and local; or generalized, describing a category of places; or places distinguished by a specific set of characteristics. Two further characteristics that define place as wilderness are (a) that wilderness is defined cosmologically, and (b) that wilderness is described in terms of human agency.

2. *Wilderness is defined cosmologically: it is subject to "natural" processes and dynamics.*
   Wilderness is "natural," subject to natural processes and dynamics. The reference to nature has to involve a cosmological perspective. But what place is not subject to natural processes and dynamics? If all places are so subject, there is no distinct definition of wilderness based on the operation of natural processes. One response to that statement is to do away with the concept of wilderness by saying that wilderness, in fact, is everything—all of the universe in which natural processes operate. Another response is to impose the duality of Western cosmology: wilderness is the place where *only* natural processes and dynamics are of lasting importance, and what is not wilderness is subject to some other order. The trouble is, of course, that the only other order that is not "natural" comes from distinguishing "natural" from "human," and we are left removing ourselves from nature in the definition. Another response, though, is to consider process, to suggest that natural processes are local and specific processes, and that they can be seen to operate in a different way in a wilderness than they do in an area that is not wilderness. That would remove the necessity to consider human agency from the definition of wilderness. In fact, in all our conceptions of wilderness, human agency is involved, even when it, wilderness, is defined by absence of humans.

3. *Wilderness is defined with reference to human agency.*
   The older concept of wilderness that considered the inhabitants of a wilderness to live with a lack of divine or human-imposed order died with 20th-century ethnography and anthropological cultural relativism. There is still no way to define wilderness except with reference to human agency, if only to say that wilderness may be a place where there is no human agency.

> But there are weaker statements of wilderness, all involving process—the manner in which human agency and a place are related: wilderness may be "places humans leave alone" or "places (modern) humans pass through, do not inhabit," or, if they do, they inhabit them "lightly," usually impermanently, and without altering place; "places where groups of humans do not live;" "places humans do not act upon with the technologies of modern technological systems;" "places humans do not exploit."

We can come to a definition of wilderness that does not involve dualism, but unity: wilderness is a place where humans recognize a priority of natural order. That means that definition of wilderness is with reference to human action. If the statement "wilderness and storytelling are the same thing" is to teach us anything, we should look for the ways in which storytelling involves the same processes and attributes as wilderness.

Storytelling

Ways of Describing Story

The academic literature that deals with First Nations stories deals primarily with text. It has been based on an assumption of equivalence of the genre, "folktale," across cultures. Basing his model on a very limited number of European stories, Propp (1968) tried to provide a model for the analysis of folktale by structure and motif; Dundes (1965) compared numbers of tales with respect to story elements, each textual element coded, in order to compare the configuration of story elements across cultures. Interpretive analysis of tales is exemplified by Jacobs (1959), who described story elements in psychoanalytic terms and saw cultural dynamics symbolized therein. Levi-Strauss (1969, 1978) and Hymes (1981) analyzed symmetrical relationships between elements within stories in order to get at underlying cultural dynamics and themes. All of those approaches have this in common: a focus on text. Within the text, the coherence was assumed to be narrative plot, systematic thematics, or underlying cultural dynamic. The texts they worked with were always recorded, either in writing or on tape.

Particularly interesting is the extent to which global judgements have been made, based on a single example of a tale. The recorded single telling takes on authoritative character, not only as representative of the culture from which it emerges but also of the tale type and motif family it is alleged to represent. This categorical imperative, even if it embraces the importance of the process of the telling between audience and teller, does not include the pan-environmental connection to the place of the telling. Approaching story as a noun rather than a verb, as a commodity rather than an animated and organic pattern of comprehension and composition, leads to a view which permits both structuralists and interpretivists to define story as text.

By not recognizing that an aboriginal view of the interconnectedness of all things is an active process of thinking and doing, the focus on text misses the point. The point is that the principle guiding nature, interconnectedness, also guides the symbolic realm and so thought must be able to surround and enfold within it the connections between the material and the symbolic.

There are different classes of story in the First Nations cultures of Western North America. The classes are structurally and functionally different. They constitute, in fact, different genres. Sacred stories have religious and ceremonial applications to etiological questions, and frequently employ a language specialized in its use for concerns which have to do with the deep past and with theistic matters. Historical legends, on the other hand, frequently deal with historical human time scales and with issues that can be dealt under their terms. They frequently employ a ceremonial language meant for topics serious to this realm. Other classes of story believed to apply to life-world lessons as they relate to moral lessons, employ everyday speech and day to day time references.

Walter Lightning (1993) specified two assumptions and four interpretive principles for Cree Elder discourse, and those apply as well to sacred stories. I have no authority (as will be discussed below) to tell about such stories; I take on only the responsibility to deal with what I have learned about the nature of stories. Following Lightning, I discuss some of the implications for environmental thought that come from looking at the nature of stories. Lightning described one written discussion from one Elder. I find consistency in his description with that of Linda Akan's discussion of a Saulteaux Elder's discourse, and with analytic work, completed with respect, by two non-First Nations anthropologists who have worked with Western Apache and Northern Dene people.

Lightning's interpretive direction begins with an assumption about "mutual thinking": "active attention, humility of the hearer, and respect for the Elder will put one in the frame of mind where the minds can meet" (p. 230). This is related to Lightning's first structural principle, the nature of the relationship between the Elder and those with whom the Elder speaks. That relationship is one of mutual vulnerability, where the authority of the Elder is proved, with reference both to internal coherence of stories and goodness of fit to empirical observation. The second structural principle is that complex systems of metaphor are used, both situational-specific metaphor and commonly-used metaphor. They are instructive in the "unfolding" of levels of meaning of the story or discourse. The third structural principle that is required for story interpretation is that the Elder will implicitly and consistently situate the occasion for telling the story in time and place: the story will be a localization of abstract meaning. The fourth structural principle is that systems of implication will be used, and the hearer is expected to think about what each element of the story implies, not what is manifest in the text itself. The final assumption is that of "resonance" or "reverberation" of the event, through connected domains: the story must make sense in more than an intellectual domain, but also in physical, emotional, and spiritual domains. The telling of the story matters in a larger scheme of things, and the way that the story is told matters, at many different levels than at the level of story, or of interpersonal interaction.

This discussion follows Lightning's direction very closely: any authoritative statement about story is his or the other authorities' whom I cite. The application to ecosystemic thought is my interpretation.

Attributes of Cree and Dene Storytelling

Authority and Protocol

In Western Plains Cree culture, sacred stories can be dealt with only by people who have the authority to do so:

> There are "sacred" stories as opposed to "historical" stories, and traditionally it has taken forty years or so of apprenticeship for an individual to work to gain the authority to tell the sacred class of story. That length of time is not required just to learn the texts of the stories, nor how to perform them. It takes that long to acquire the principles for the interpretation of the stories. (Lightning 1993:229)

Lightning notes that there are protocols for the acquisition of that authority and ability, things that people involved in the transmission of the body of knowledge of story must do in order to fit themselves into the scheme of things in which the authority of the story is maintained. Protocols are formal and ceremonial arrangements, sometimes taking years in preparation, to ensure that people and ethos are in balance. It is Elders who personify the authority of the story, and the protocols establish reciprocal obligations between Elders and learners, and between the Elder-learner combination and the order that is observable in Creation. One of the ways the integrity of the stories is maintained is by ensuring that the appropriate protocols, actions external to the story, connect it to the here and now.

Lightning is clear that the stories are not texts of narrative plots, but possibilities of permutations of a complex array of possible story elements, the selection criteria for which realization of any story element are place, occasion, and participant: a unique version of a story may be told on one occasion and another unique version on another occasion. The Elder has learned the appropriate conditions for a grammar for permutation of elements. In the complex web of possibilities, all stories are connected, so that Jo-ann Archibald can express the connection in Sto:lo story this way: "It is all the same story" (cited in Lightning 1993:217).

The authority of people involved in storytelling is shown by their knowledge of the interconnectedness, their ability to make the story speak to *you*, at a particular time and place, and their respect for the integrity of the story.

The Levels of Meaning in a Story

Richard Bauman (1978) and Dennis Tedlock (1983) have recognized that neither the meaning nor structure of a story can be analyzed from the text of a story outside the place and occasion of its performance. They have given their attention to specific tellings of story to discuss what stories mean according to how and where they are performed. It must be pointed out that this perspective has been relatively rare in the academic traditions that deal cross-culturally with story, but from the early 1980s onwards their work began to correct an imbalance in academic literature. Going beyond the point of view that maintained a dualistic separation between text and performance, they have established fertile academic analytic possibilities for understanding the principles and purposes which both text and performance must combine. They recognize that the relationship between teller and hearer affects both text and performance, and the unit of analysis becomes the human, or humans in interaction, in the here and now. One of the venues in which Tedlock became engaged in story provided an interesting counterpoint in recorded text. When Tedlock discovered that surface text was not story content, and went instead to performance, place, and the principle of systems of story-within-story, he discovered that current Maya narrative maintained the complexity, thematic integrity, and information-specificity of the written *Popul Vuh*.

That story-within-story principle is not specific to the Maya. Quoting Wapaskwan, Lightning describes how the unfolding of the meaning of story takes place at a number of levels through the use of narrative sequence wherein "there is another story contained within [a] story, like a completely different embedded or implicit text" (Wapaskwan quoted in Lightning 1993:229). In the manifest story there are "clues, directions—better yet—*specifications* for the interpretation of an implicit text embedded in it" (p. 229). Maintaining their completeness or wholeness the "elements of a story fit and are coherent as complete texts at each level" (p. 229).

The ecosystemic resemblance here is compelling, since the "relationships of each specific surface element of a story to its manifestation (or interpretation) through various levels of embeddedness is also part of the structure of the story" (p. 229). The "surface" or "manifest" element must be right, or resonate accurately with and for its place, in the levels of story and in the "fit" of the level with the surroundings in which the story is set. Those environments where story is told are also resonant with other domains, but this will be addressed more fully later in the discussion of "place."

The ecological model which resonates in the story must also be a cognitive model, for both domains have to have symmetry in their connectedness. In connecting mind and land, the assumption of unity informs the ecological principles by which both ecological place and story operate. In maturity, knowing these two domains prepares one to

> speak the higher version of the language, know the principles for unfolding the stories, and ha[ve] some degree of skill in constructing

> and telling such stories. There are checks for validity of the story at each level and between levels. The stories have to fit, precisely, at all levels to be coherent. (p. 229)

By disallowing objects that are not appropriate to the ecology of the story, elements that are not "connected" at all levels are not able to survive the validity check. This symbolic system speaks both to the ethos of embracing what is right and resisting what is contaminated or polluted, for these would be injurious to the ecological health of resonant connections both on the surface and deep down—to say nothing of recognizing that the ecology of mind and land are guided by similar principles for keeping each as an interconnected and self-organizing system. In this way, it is possible for spatial and temporal, as well as physical, spiritual, and mental, to cohere within an ethos which provides an environment where what is valid and common to each domain works in the same "space" in equitable and powerfully instructive interactions. The domains eventually disappear under the guidance of a uniting ethos in such a way that they are greater than the sum of their individual parts. There will, as I have noted above, be more on this later, but for now it becomes possible to behold how "a specific story" is

> at one level, that sequence of the story that contains a very precise topological description of a stretch of the Missouri River and the basin around it, just south of its confluence with the Yellowstone. At another level, the same sequence contains a very precise set of principles for relationships between specific kin. (Wapaskwan quoted in Lightning 1993:230)

True to form, the lessons of the tale, in their depth and multiplicity, are not to be understood immediately. Wapaskwan concludes, "It is as if it unfolds" (p. 230), not only across the linkages between relatives and land but also across the decades of memory that span the journey of life from childhood to Elder.

Clearly, the capacity for multiple domains to come together under the guidance and certainties of age suggests that the story can accommodate principles that work mutually in mind and nature. Given that the story Wapaskwan refers to includes both the functional equivalents of relief map and an instruction on kinship duties, and those other connected realities which it "unfolds," it is necessary to reconsider mind and nature not as a duality but as a common process of being.

Here the practice and assumption of mutual thinking with the Elder demonstrates that a frame of mind can emerge based on "active attention, humility of the hearer, and respect for the Elder" (Lightning 1993:230). Minds meet. This assumption relates to the principle that "the elder makes himself/herself open" and that "vulnerability and compassion can be expressed with the word, love" (p. 230). This quality of love can be regarded as an environment about which the Elder has an expert knowledge. It is a "place that specific knowledge is appropriately brought out" (p. 230) in synchronicity with "the readiness of the individual to perceive it" (p. 230). Once this "place" and "time" is achieved the Elder has the responsibility to speak that truth. In so doing the Elder is conscious of which metaphors, some of which are standard, best suit the audience and storytelling occasions so that "truth can happen" or unfold (p. 231). This unfolding is inseparable from the environment of love which is itself the required or, at least, desired environment for the exercise of those metaphors that have validity in all domains and so "bridge between the levels of meaning" (p. 231) to achieve various specifications at those levels.

The Specific Location Of Self And Interactions In Time And Space

> An Elder almost always uses speech and non-verbal communication to point out, or establish where the Elder, the hearer, and the conversation fit in time and place to establish the temporal and spatial context for the interaction. The dialogue, in the way the Elder uses speech or demonstration, often includes a kind of implying of two reference points. This has the effect of immediacy. One of the feelings that seems to be created by an elder is that hearers always feel that they know where they are, ought to be, in relationship to the earth. The immediacy almost means that the content of a talk with an Elder cannot stay at a level of the abstract. There is an implicit statement that "this is empirical". This sets a context for both interpretation and validity. (Lightning 1993:231)

Lightning offers a principle which ties together both "immediacy" and "location" with the environment of love without abandoning the empirical. Together, the composition as well as the interpretation, or listening, create a methodology for allowing place to happen. Conceivably, this openness to location could metaphorically encapsulate both the yellow aspen leaves of autumn along the Missouri with a recommended duty to kin and be resonant with both, as well as other domains and ages or times, and so endorse a harmony with the greater environment. This sympathy or resonance between the place created by love and the relation of that compassion to the compassion of the earth appear firmly interconnected.

The Uses of Systems of Implication

Lightning says that Elders, in story, often may not "categoric(ally) or specific(ally) stat[e] things" but rather "state things in such a way that there is a continuing unfolding of meaning" (Lightning 1993:232) of systems of implicature. Thus, "as the learner follows the implication of the statement," the interpretation of the implication will be checked for "internal incoherence" to see if the learner is "putting it together properly" (p. 232). Challenging the concept that this is information transfer, Lightning sees it as a self-organizing process of "creation and recreation" of living story, whose holistic domains are both physical and emotional as well as intellectual. Yet the centre that keeps it all going is "ideally a spiritual thing" whereby an implication arranged by the Elder grips the listener by allowing him/her to remember the relative equivalency or correctness of the correspondence between, for example, a mention by the Elder of dawn (e.g.), and an implication, sometimes realized a long time after the telling, that the statement has something to do with prayer.

In summarizing mind, Lightning speaks of it being "not so much a mediator of these things as the location for the interplay of these things" (p. 237). The possibility of mind's being an environment, which Lightning is suggesting, is the common ground between land and story as an activity of mind. In effect, mind is as much an environment as that which would normally be referred to as "the environment" in the environmental movement. Thinking of mind as a place whose harmonious actions are revealed by other places, and vice versa, assists in understanding the ecological principles that mind and place operate by and through. This is called both love and compassion and is why "mind is life" on one hand, and why "the spoken word is life giving" (p. 238) on the other. By allowing "life to be" in the "place" of the mind, the living environment is confirmed. The mind is confirmed, as well, as a living entity.

The spatial quality of mind is beautifully demonstrated in the late Linda Akan's description of mind and existence: "a walk of life is how we arrive at the knowledge or make sense of that task" (Akan 1993:193). But she notes

> these levels are domains of existence. ... The use of metaphor to describe the domains is useful, but only insofar as it can be likened to an actual state or condition of something; the rest have to do with ceremony, reality, meta-realities, and those aspects of personality that are located within us. (Akan, 1993:193)

This model for being that is so spatial is also reiterated in Linda Akan's statement that a person with a good character is someone who "minds all things" (p. 203) in a "live, syncretic nature of Saulteaux oral discourse" (p. 209). She suggests that

> teaching through talking is tracing that great chain of being with words; it is providing a cognitive map so students can mentally walk around in life. Conceptually, the Elder advised me to "go underground" so that I could hear the real message of the Earth—the place of our origin, our present location, and our future survival. (Akan 1993:211)

Revealing like Lightning, that oral words are a "map" for the walk of life, she warns, "it is not wise to regard modern education as a replacement for ancient modes of teaching and learning that have withstood the test of time" (p. 210). A teaching she later calls "walk talks" again testifies to the essentially spatial character of her understanding of mind, language, and learning. She depicts wisdom and its path, "Walking with Care") as being "earned, not learned from a book" (p. 214) and describes what activity would be so constituted with this conclusive summary:

> If one were to try to give a metaphorical description of some of the features of First Nations thought, one might say that they go to school

> in dreams, write in iconographic imagery, travel in Trickster's vehicle, talk in metaphor, and always walk around. (Akan 1993:213)

The repeated equation of mind and spoken language with place and with spatial qualities now brings the matter of the cultural relationship between the land and mind as they inform each other. Or as Walter Lightning's informant Elder Louis Sunchild summed it up, "the certain things that I keep in my mind stay there" (p. 234).

Love can be seen as that spiritual aspect of ecosystem whose presence is part of an ecosystem as surely as trees and stones. In a biological and spiritual ecology of place, the Elders are restoration ecologists. Their insight demonstrates the connectedness and unity of the domains that modernist thought has dichotomized. As Linda Akan say, "Elders keep going back and forth between physical and spiritual domains" (p.245); to demonstrate that

> an individual's epistemology ideally should be grounded in spiritually based principles. When people understand their own origins, they come to regard the creation story of turtle island as a sacred relationship. The way our thinking and our behavior restructured becomes a dynamic, changing orientation to a living environment. (Akan 1993:212)

Walter Lightning discusses the resolution of the dualism in Cree culture, and the connectedness of humans, and humans with nature:

> One of the things that is particularly impressive is the idea and practice of connectedness, the "belonging" nature of the culture. Individuality and unity are not opposites. The whole family is figured in terms of the family, not only as in the immediate family, but as universal family, with God as the father. When that is elaborated in all its complexity there is an identity with creation.
>
> We can speak of Nature as being us. (1993:247)

Place, Place Names, and Placing

Only in the very recent past have Western analysts discovered the identity of physical place and story in First Nations cosmology. The importance of place to two Athapaskan cultures, the Western Apache and Northern Dene, have spirited the enquiries of Keith Basso and Julie Cruikshank. The identity is so immediate, according to Cruikshank, that story and place identify each other: stories will have different manifestations when recounted in different places, and some stories can only be told in specific places.

Names of places are important in this context. Cruikshank's 1990 discussion of naming and places describes normative Athapaskan traditions surrounding the cultural usage of place names to discuss, understand and preserve history:

> For Athapascan elders in the southern Yukon, landscape is more than just an included theme: they seem to be using space (in the form of place names and travel accounts) to talk about time. Familiar landscape features become symbols allowing people to use powerful images from nature to talk about culture. (Cruikshank 1990:54)

By contrast, in the academic and applied discussions of environmental education, there is only the most minute evidence that such a bridge exists between land, language, and time, and the way in which one informs the other. This is particularly shortsighted in light of Basso's revelations about the potential of the recognition of this unity for establishing a correct cultural and behavioral relationship with the land. Says Cruikshank of Basso's research findings:

> There is a ... model of Western Apache storytelling which holds that oral narratives have the power to establish enduring bonds between human beings and features of the landscape, and that as a direct consequence of these bonds, people who behave improperly will be moved to think about their behavior. How people think about the land, then, is intimately related to how they think about themselves. In other words, two symbolic resources, language and land, are manipulated to promote compliance with standards of behavior. (Cruikshank 1990:54)

The essence of Cruikshank's commentary appears to be an observation that how one knows the land influences behavior toward land, toward culture, and toward self. This is not an altogether recent revelation; Hayden White (1972) credits Giambattista Vico in the 18th century with recognizing that aboriginal people, thinking "poetically," "lived poetry," and provided a model for a process leading to moral redemption, by a return to original knowing and expression (White 1972:30-31; see Vico 1986). This was accomplished by having periodic returns to mythic thinking, purging the effects of technical and instrumental rationality.

However, the environmental relevance of mythopoeic communication is more exactly spelled out by Basso and Cruikshank who together discuss the way "a word is like a picture" (Cruikshank 1990:55). What is important in this visualization is what Basso says about "the ways in which spatial and temporal conceptions are embedded in place names and with the ways in which place names are used as situating devices, locating narrated events in the settings in which they have occurred" (p. 255). The intricacy of this relation of mythopoeic speech to nature is fascinating in the way it effects speculation about how the topography of land creates oral representations which, as Lighting has suggested, resonates across domains.

Recognizing the capacity for this kind of unity as a human facility, rather than being specific to a culture, Cruikshank quotes Francis Harwood, who discusses how:

> It is difficult if not impossible to map Trobriand narratives in chronological time ... but very straightforward to do so in space. ... The mnemonic function of place names may reflect universal cognitive processes, ... suggesting two possible axes for ordering events, a temporal one for literate societies and a spatial one for illiterate societies. Place names are ... structural markers dividing the corpus into cognitive units and spatially anchoring stories so that they can be recalled by remembering the land. (Cruikshank, 1990:55)

In this way, "thinking with nature" means thinking that holds history to be a spatial domain, and would illuminate the reason that Cruikshank's collaborator, Mrs. Joe, believes "there is a causal link between understanding the names and the stories and being able to live as an adequate human being in the world" (Cruikshank 1990:56). This corresponds to an understanding of both a mythical landscape, "a time when the landscape was in the process of being formed" and a conventional typographical map with "mnemonic pegs" (p. 56). Though what is surprising to me is that for another of Cruikshank's collaborators, Mrs. Kitty Smith, an Athapascan, "she can't remember the names unless she sees the places, ... much less explain their location" (p. 57). It turns out, "the names are a window on memory and a technique for Mrs. Smith to continue recounting her life history" and the reason why she uses them only in physical relation to her land "is because names are so embedded in context" (p. 57).

The cultural traditions of people on the land require "getting the names right" and it becomes a metaphor for encoding the entire range of cultural knowledge that should be passed on with those names" (Cruikshank 1990:58). Not only is this important for manipulating sound ecological practices to ensure an intact cultural history, but it incorporates a linguistic feature of photographic verisimilitude. An example of this ability "to enclose an entire picture in a word" is demonstrated with the term "*Ttheghra*—sharp rocks sticking out" (p.58).

Add to this poetic effect the ability to be able to point to where "wolf's assistance to man began" and soon land, like narrative; walking, like talking; will be a part of what Jo-ann Archibald calls "all the same story" (Lightning 1993:217). But Cruikshank's friend, Mrs. Sidney, who "when she tells some of these stories, she follows the narrative like a map" (Cruikshank 1990:62) is the living example of Akan's idealized description of "being" and "moving" through several domains at once and over a life time. Achieving a unity with landscape there is a, "depth and richness to locations which can be described precisely but only minimally by such scientific terms as latitude and longitude" (Cruikshank 1990:63).

Keith Basso (1987, 1988) sees the moral life and dialogue of Western Apache people as "grounded" by place names, following the way land falls "neatly and repeatedly into places" (1988:101), and in the way "place names provide materials for resonating ellipsis, for speaking and writing poetics short hand, for communicating much while saying very little" (p. 103). This allows what he later describes this way:

> Western Apache speakers exploit the evocative power of place names to comment on the moral conduct of persons who are absent from the scene. ... Called ... "speaking with names," this verbal culture also allows those who engage in it to register claims about their moral worth, aspects of the social relationships with other people on hand, and a particular way of attending to the local landscape that is avowed to produce a beneficial form of heightened self-awareness. ... Much of what gets said and done is attributed to unseen "ancestors" who are prompted by voices of conversational participants to communicate in a collective voice that one actually hears. (Basso 1988:106)

In locating the land and ancestors in a social and moral dimension, the therapeutic power is beneficial not only because landscape provides moral episodes suited to the "genius of the place" but also because the gestalt of being among so many, yet quite alone, permits the environment of love to accompany the problem sufferer. As Basso's unnamed informant suggests:

> We gave that woman pictures to work on in her mind. We didn't speak too much to her. We didn't hold her down. That way she could travel in her mind. ... We gave her clear pictures with place names. So her mind went to those places, standing in front of them as our ancestors did long ago. She could hear stories in her mind, perhaps hear our ancestors speaking. She could know the wisdom of the ancestors. We call it speaking with names. (Basso 1988:110)

In a culture where "placeless events are an impossibility" (Basso 1988:110) the "location of an event is an integral aspect of the event itself" (p. 110). Because, "people from Cibecue report that ancestral place names bring graphically to mind the locations they depict" (p. 110) and because "place names implicitly identify positions for viewing these locations" (p. 110) it is necessary both to reconsider the cultural foundations being featured in contemporary environmental education and to understand how it is possible "that in positioning people to look "forward" into space, a place name also positions their minds to look "backward" into time" (Basso 1988:112).

In relation to ecological restoration then, place names possess a distinct capacity to preserve not only an environment of love but a cultural restoration in unfolding story, a sense of original consciousness in being able to

> evoke detailed pictures of places, together with specific vantage points from which to picture picturing them, place names acquire a capacity to evoke stories and images of the people who knew the place first. (Basso 1988:112)

With this ancestral condition continuing to exist on the land it is little wonder that degrading environmental impact has been so minimal. Living without land or ancestors to think with would be suicidal to the human legacy of being-in-place—

the equal, in dominant culture, of paving graveyards for strip malls or burning libraries.

The employment of poetic language that is expressive not only of geographical feature and place name, but also of the "grounded" moral lesson, adds a dimension to both land and moral code. It also points to an ethos. For if Lightning is correct that "nature is us," it is important to recognize that the idea behind Archibald's "all the same story" is the intelligence and soul of "Mother Earth."

Media Determinism and The Ethos

Storytelling is interactional; it is based on a face to face encounter in specific places in specific times, between people—not people with roles, but people in all their complexity. And it is oral.

The media determinist positions advanced by Innis (1951), Luria (1976), McLuhan (1964, 1967), Postman (1982), and a host of others, might lead us to attribute the genius of storytelling to the medium itself, to focus on the "orality" of "oral tradition" and suppose that something inherent in the medium predisposes the cognitive and moral outcome. I have explored those ideas in other work. When discussing relationships between place, narrative, and meaning, there is something compellingly seductive about comparing an oral tradition, located necessarily in a physical interaction in a specific time and a specific place, to the medium of literacy, because as Ong (1971, 1986) points out, written text is transportable—the same text, the content, can be moved from place to place and provenance can even be lost. In literate communication, writing and reading, place and occasion can vary while the text remains the same. Comparing the cognitive consequences of the two media has created a monument of (written) literature. The seduction is to assume that orality requires coherence with context and that literacy has no such constraint, and to take, from that position, the easy step to assume that the properties of orality operate to maintain the integrity of coherence of talk with place.

That is probably the reason why so many have come to the conclusion that understanding of the mutual interdependence of domains of word, action, cognition, feeling, place, ethic, and individual identity may be "easier" for the "preliterate mind," as Vico (1986 [orig. 1743]), Turner (1985), Highwater (1981) , Oeschlaeger (1992) and Orr (1992), and I myself (Sheridan 1990, 1991) have suggested.

The idea is as facile as it is seductive. It is seductive because it removes a particular responsibility from us to acknowledge that to live a life as a human is to be intractably involved with other humans, other living things, and with physical place, in the making of ethical choices. To suggest that a medium, orality or literacy, even predisposes humans cognitively or affectively to make moral choices that fit more coherently with the balance of nature removes from us the obligation to consider ethos, as ethos, in its own right, and to examine our own ethics, whatever the media of our connection with others, place, and idea. A determinist position exculpates us.

To assume that "oral cultures" have a built-in fix on good ecological moral choices, and that "literate cultures," with a medium that allows for context-independent information (whatever that may be) must rally back to orality, to some better cognitive and ethical place, is to reconfirm the familiar divide between wilderness and non-wilderness, and to accept the kind of dualism that divides peoples along moral lines, using putatively morally-neutral criteria.

The assumption, as well, trivializes the integrity of aboriginal ethos.

In other words, it is not the medium, orality, that determines Cree, Northern Dene, and Western Apache thought about connectedness, it is an ethos that is evident in what Cree, Saulteaux, and Dene traditionalists *do*. The ethos of responsibility, authority, and respect which pervades and animates the Elders is paraphrased by Linda Akan as "careful thought about oneself in a world with other beings" (1993:212) which, I believe is itself an exploration of ecological and spiritual relationship made very compressed in her equation "walk=culture" (p. 212); that is, "learning how to think and act in a morally acceptable way" (p. 208). I accept Wapaskwan's realization that "stories are constructed so their meanings unfold over time" (p. 217); I would like to add, based on what I have observed but not on any cultural authority, "and over land."

The enabling characteristic that allows the lessons to "unfold" the "compassionate mind" is the ethos of love. That ethos, in physical, spiritual, mental, emotional, and interactional realms, attributes love, respect, authority, and interconnection to the environment, and affirms our identity with the environment. Though it is possible to reject the coherence of these realms, the consequences of so doing are increasingly obvious as social, psychological, and environmental degradation continues under the hateful domination of "otherness" and under a conventional scientistic conceit that each of these realms is separable and discrete.

Once in touch with the principles which stem from the ethos of compassion, there exists the possibility for harmony and balance to surface as the operational dynamics of an ecological thought that finds its essence in the understanding that "the source of existence is directly associated with the mind." (Lightning 1993:218). In "grounding" the mind in a compassionate identity with landscape, the mind not only seems to work better but it is also able to remind itself of what principles need to be ever present not to violate the ethos.

Elder stories celebrate the synchronicity, or identity, of multiple realms at the same time. They are a very complex system (Lightning 1993:248). This system, like the land, is alive because as Lightning writes, "Mind is life" (p. 238).

The fact that it is the coherence and validity of Cree, Saulteaux, and Dene ethics, and not the medium of orality, that brings us to this summary is evident in the fact that you can get the story wrong; you can get out of synchronicity with the story, and can do injustice to the story's fit with the ethos. Lightning says that the ethos "protects itself" (p. 241) over time because of the "divinity which is behind it" (p. 241). If the telling of it, the living of it, the fit of it with the environment, do not conform to the ethos, the value of the telling "powers out" (p. 242). The ethos is not violated, nor the story itself compromised; in such a case the human agency is faulty. The authoritative story and the ethos make responsibility incumbent upon us, the hearers. Just as we have acted so clearly irresponsibly in our interactions with land, air, and water, we may efface story. Our concern with authority, protocol, and the maintenance of stories' integrity may be summed up by Elder Sunchild: "We want to keep the ethos and our relationship with it—our living in it—precious" (p. 242).

This is a significant argument for preserving the symmetry between traditional story and land, if for no other reason than to see how we unfold from where we are. It is also to say that the cultural dimension missing from environmental restoration exists.

Wilderness and Storytelling

It was in looking at processes involved in conceptions of wilderness (i.e., how we deal with place), not attributes (i.e., characteristics of a place), that we found a conception of wilderness which did not impose mutually exclusive dualities, and did not thus define wilderness as "other". These three characteristics of wilderness were not sufficient to define the concept, but were necessary for its definition:

> Wilderness is a place;
> Wilderness is defined cosmologically;
> Wilderness is defined with reference to human agency.

It became clear that the telling circumstance in describing wilderness was *how* human agency, defined with respect to nature, interacted with specific places. The definition of wilderness as "a place where humans recognize a priority of natural order" is as good as any other.

The identity of storytelling with wilderness leads us to these observations.

Place

Storytelling, like place, is specific and local. Each telling of a story is unique. There is no abstract, ideal story, only stories realized at specific times, in real places, with flesh and blood people. But, like terrain, each story is connected so that "it is all the same story."

Cosmology

The ethos, for the story, is the analog of the earth. It exists, it is "natural," and it is the context for where we live. We violate it, get out of balance with it, to our own detriment. It protects itself through the operation of natural processes. It is unknowable in all its complexity, but intimately knowable in its specific application to our "here and now."

In storytelling, observance of the appropriate protocols bring us to a recognition of how well we fit, in balance, with the ethos.

Human Agency

We enter story with respect and awe, but with an immediate connection to it. We inhabit it lightly. We do not exploit it or use it.

To take these imperatives of story back to our notion of wilderness, we know how clearly storytelling directs us to recognize the universality of natural order, that even with all of our technology we cannot "control" or "tame" nature except in our own self control. We recognize the inability to distinguish ourselves from "wilderness," to recognize that the wilderness is where we live, and to look for the ethic of wilderness—the priority of natural order—in our daily lives.

To discover that the concept of the wilderness tells us where we live—that we are part of the processes of wilderness—invokes the moral imperative to move lightly through the environment and to stay in balance with it. That is the unfolding, for this time and place, of the teaching of Elder Raven Mackinaw.

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CHAPTER VII. STORYTELLING FOR ENVIRONMENTAL EDUCATION

The Need for A Reorientation

Assumptions About Environmental Education

Environmental education seems to be motivated by these four general assumptions about what we teach, how we teach it, and why.

1. *That environmental education is based on information.*

This assumption includes these subsidiary observations about information and environmental education:

- The first is that *environmental education is based on information about the environment*. The literature in environmental education is clear (a) that we need *more* information about the environment; and (b) that we need to have it more effectively organized for access and presentation.

- The second subsidiary assumption is that *people's having information about human activity which affects the environment is something that motivates behavioral change*: that is, when people see how human activity affects the environment, they change their behaviour.

2. *That we segment that information for presentation in education, as a sequence to correspond with our knowledge of human developmental sequences.* This assumption is a pedagogical one: we assume that our knowledge about human cognitive development motivates the arrangement of information about the environment into appropriate levels for instruction; i.e., the mass of information is, of course, so voluminous and complex that we have to segment it for presentation to children and adults in education; what we know about the sequence of human developmental stages motivates classification of information by age-specific instructional strategies.

3. *That the ethic of environmental education is self-evident.* We assume that it is a self-evidently bad thing, for human and other life, for humans to continue to harm the environment, and for humans to continue to do so threatens all life.

Note that this means that the ethic of environmental education is information-driven as well: we assume that knowledge about the effects of what we do, and knowledge about the consequences, motivates a reorientation in behavior. The motivation is strategic (i.e., for survival, a valued thing), and the valuing of survival motivates a moral imperative. An ethic is either (a) derivative of information; or (b) corollary of information.

4. *That the goal of environmental education is behavioral change.* The behavioral change we envision as a goal is both individual and collective. At the individual level, the goal is responsible individual action; and at the societal or collective

level, the behavioral goals are (a) the responsible management of the environment, through information-based technology; and because of the participation of environmentally-informed citizens, (b) for the formulation of policies, through citizen participation in government, which constrain and direct individual behavior.

The Issue

Those assumptions seem to me to be a fairly accurate description of the current state in environmental education (Sheridan 1994a). In response to the body of literature and practice that informs current environmental education, I want to raise the issue here that meaning in environmental education has to be more than cognitive, conceptual meaning. Engaging children and adults in an awareness of what it means to live *as part of* an environment has to involve their feelings about their connection to the natural world, including the natural world of technology.

Two pedagogical areas, outdoor education and experiential education, propose agendas for an educational practice that is consistent with the one implied in this paper, but there is one substantial difference. Experiential and outdoor education seem to me to be absolutely basic to environmental education. Both of those pedagogical areas are based on premises about how people learn best, what they learn through experience as opposed to what they learn by being told about something, what they might learn through hands-on experience with their environment, and what they might learn through recognition of their immersion in an environment and their intractable connection with it.

The aspect of the approach suggested in this paper that is different from those areas is in that area of abstraction from experience, the area of "being told about something" rather than "experiencing something." Storytelling appears to have the potential to reconcile those two things: it requires reference to lived experience and feeling in a way that straightforward reference to "information" does not; and if it in fact has the properties claimed for it in the two traditions I examine in this paper, storytelling, in a profoundly human sense, is a lived experience in its own right. That is its genius. Storytelling may be highly abstract in its use of metaphor and other referential systems, but returns us to a realization of the identity between ourselves and the places we live. The condition under which storytelling can do this is if it is motivated by an ethic of holism.

Thus a proposal to inform environmental education with storytelling is more radical a proposal than that of outdoor and experiential education: it is a claim to inform not just that area of education that can be called "experiencing something," but also to inform that area that can be called "being told about something":

1. An ethics-based storytelling should provide the organizational logic for the information about the environment with which we deal in environmental education.

2. An ethics-based storytelling should provide the organizational logic for the way we approach educational practice, relative to human cognitive, emotional, and physical growth development.

That does not mean a reorientation to an environmental education founded only on how we *feel* about the environment, nor an education that is oriented to creating specific feelings. Collection and dissemination of scientific information about the world and nature, of course, is fundamental to our thinking and teaching about the environment. We have to examine whether or not information presented to people, based on the assumptions which are introduced above, is likely in fact to motivate individual and collective behavior and attitude change.

We have now a theory and practice that is built around *what* we teach, but I want to make the claim that *how* we learn and teach is a prior consideration.

The four assumptions about current environmental education practice (see page 114) involve creating age-appropriate information and directing it to children and/or adults, for both (a) cognitive "consumption" and (b) the development of an affect (or feeling, or emotion) about how to treat the environment-at best, how to live in an environment and how to assume the role of responsible public citizen in collective treatment of the environment. The way that those assumptions are related involves a pivotal pedagogical role for the self-evident ethos: people's behaviours are expected to change to environmentally-responsible behaviour when they see it is bad to continue to pollute and degrade the environment.

The problem is that it is possible (maybe even likely) that a *completely* information-driven environmental education creates precisely the most dysfunctional and misdirected knowledge: that we are separate from natural processes. Information-based environmental education has people "acting *on*" an environment rather than "acting *in*" an environment, and directs us to such action based on a prior assumption of mechanistic, particularistic, relationships in an interactive domain that includes people/human behavior/environment.

The compelling question suggested by all the foregoing is how to frame an environmental education that creates an awareness in all of us that

- we are part of the natural processes we observe;
- that there is a dynamic of natural balance that we must acknowledge in order to get the information even conceptually right;
- that we cannot "manage" nature as though we were separate from it, but must interact with the environment in a way that our knowledge about it is not only conceptual and cognitively manipulable information, but so that it is a personal knowledge, the kind that involves our knowing cognitively, affectively, physically, and spiritually.

That is, we need a kind of 'holistic knowledge' about a 'holistic system' in which what we know

> - can be segmented, presented, experienced in comfortable and manageable dimensions, in "human" terms; and
> - is not particularistic, atomistic, nor mechanistic, but rather acknowledges that the specific things we know are intractably inseparable from the complex whole; that we cannot know all the connections.
>
> We have to acknowledge that we necessarily make such particularistic and mechanistic assumptions, but at the same time we have to recognize that we do that artificially and analytically, and that the artificiality is a product of our necessity to segment and abstract in order to describe. The conceptual educational issue may be, then, after we have made such an assumption, to go back to the unity from which we recognize that we have abstractly conceptualized a separation between "us" and "nature."

Storytelling: A Premise for an Ecology Of Knowledge

There are two areas of compassionate criticism of educational practice during the past decade which I point to as providing some promise for redirection. The first critical area defines a problem in the dualism involved in separating ourselves from nature; the second critical area suggests a pedagogy and androgogy based on the story, and storytelling. A third area of discourse that has seen a fair bit of print in the past decade is description of principles of First Nations storytelling. In this paper, those critical areas are brought together to suggest a reorientation in environmental education. (I do not propose to direct us all to First Nations stories and storytelling, but to see what principles of First Nations storytelling teach us about story, relative to ourselves.)

Storytelling employs what might be called "grounded metaphor" and so may employ a symbol system that has symmetry with the intractable interconnections between knower and known, place and participant. It may then fulfil the need for such a symbolic system laid out in Oliver's and Gershman's (1989) critique of the role of education in the cosmology of modernism. Their prescriptive recommendations for appropriate processes to undergird the apprehension of reality in holistic ways is based on this critique: that information generated within metaphysically dualist thought is fragmentary information. They say that dualism inevitably creates a cosmology inconsistent with the responsibility both to the ethic and to the reality of interconnection between humans and the environment.

Oliver and Gershman point to Western dualism, a predisposition which renders our analytic categories as fragmented descriptions of what is out there, as the problem. In examining Raven Mackinaw's statement that "wilderness and storytelling are the same thing" (Sheridan 1994b) I have discussed that dualism as well. I want also to argue that having a predominantly information-theoretic idea of environmental education, in which an ethos is derived from information, is a problem.

All of those observations do not lead necessarily to more theorizing, more analysis of dualism, and more discussion of ethos, but rather to a common sense decision: we need an environmental education that is based on the observation of the priority of ethos, an ethos of our connectedness, our identity, with nature and natural processes. That common sense decision means that we must complement the fragmenting ethos of modernity and its symbolic systems, and, while admitting the conceptual necessity to "fragment" in order to describe, we must attempt to find a medium that integrates particularistic knowledge in an ethos of connectedness. Kieran Egan's theory of the pedagogical adequacy of oral storytelling needs evaluation, to determine storytelling's ability to encompass Oliver and Gershman's demand for holistic cosmology, and to offer facility in a symbol system whose goodness-of-fit to nature creates ways of knowing the empowering principles of the natural order.

An illustration of claims made for story's potential is in the way that story combines local and global reference, and plays that referential system in immediate and specific experience. As a conclusion to my illustration of the need for a reorientation of environmental education away from information and in the direction of information-as-experience, I introduce the concept of "place" in story.

Kieran Egan's thoughtful call to return to story as a foundation for education is briefly described, with particular reference to the direction it appears to provide environmental education.

Many of Egan's statements suppose a distinction between "literate" and "oral" cultures. In terms of that categorical scheme, First Nations cultures have been "oral." In fact, First Nations storytelling, at it has been described over the past decade in academic literature, has a coincidence of purpose, function, structure, and existential presence with the kind of storytelling I envisage for environmental education, so I describe some of its properties, and speak to Egan's theory with reference to that tradition.

Global and Local: Starting In Your Own Place

Environmental education begins with the definition of a global problem. The global nature of the problem is obvious and much more than engaging: the scope of the problem is in fact inconceivable in its totality and in the possibility it holds for our self-destruction. To base environmental education primarily on that definition at the global level, however, may direct learners to the information-driven model and away from the local places where they live. Print or electronic information remains the primary focus for globally-defined issues in environmental education. Global models are nested in representation as information and allow vicarious experience on a scale which holds substantial potential for thinking that has been historically aligned with large-scale social dynamics such as imperialism, empire, domination, and class struggle. It is appropriate to describe the current global ecological dilemma in those terms, but there is the potential in information-driven representations of global problems for a rejection of the primacy of the concept of local and particular place.

The global environment is made up of such places, and people live in them. It seems more appropriate to start environmental education with reference to particular places, and instead of looking at them as microcosmic of the global, look at those places as contributing the larger abstraction of the global perspective.

That observation brings up again the question of method: how do you begin by looking at a particular place, where the learners (and teachers) live. Both school curriculum and the material life it represents seem to be structured so that involvement with local place is of tangential concern to the global problem. I believe that it is necessary, now, to restore *engagement with local place* in environmental education and to reformulate its objective as being the practice of what the elder who taught him called a "compassionate mind" (Lightning 1993) of connectedness with that local place. That means that our objective is personal growth.

Our teaching methods must contribute to that kind of engagement with place. Story appears to hold that promise. First Nations storytelling is a model that demonstrates the potential for both engagement and local reference. For people not raised in a First Nations tradition but who study First Nations storytelling, a major breakthrough occurred in the late 1970s and early 1980s when they discovered an important interpretive principle about such stories: the narratives and the performance of them are unselfconsciously location-specific (e.g., Basso 1987, 1988; Cruikshank 1990; Tedlock 1983) and manifestly engaged with "place." It is interesting that First Nations people who write about the stories, such as Akan (1993), Archibald (1990), and Lightning (1993) do not seem to find this remarkable, and accept it so much as a given that it is elementary. First Nations storytelling demonstrates that a bioregional and local focus grounds knowledge and permits the construction and elaboration of abstractions in line with the principles of place.

Because non-Natives have their own traditions in story, and certainly some idea, however different, of identification of people and self with the concept of place—specific places—we might turn to the precepts that First Nations storytelling provides us and find our own pedagogical method in our own stories. That approach may serve to balance environmental education's primary identification of information and abstract place, and help us understand that what and how it is to be human, inevitably involves relation to place.

Kieran Egan and the Ecology of Story

Kieran Egan's (1987) article, "Literacy and the Oral Foundations of Education," equates participatory consciousness, achieved through oral story, with an ability to recognize the nature of human connection to place:

> Valuable too is the fluent and flexible use of metaphor, as it is fundamental to language and thought, and is, along with the systematic logic of Western rationality, one of the tools of effective thinking (Cooper, 1986). In the education of modern children into literacy, then, we will want to ensure that fluency of metaphoric thinking is maintained and, if possible, increased. Similarly, the sense in which members of oral cultures see themselves as participants in nature, rather than as set off against it and "conquering" it, seems a valuable characteristic that we should try to preserve in children and regain for literate Western cultures. The development of this sensibility in some form may save us from destroying the natural world that sustains us. (1987:466)

That passage adumbrates some of Egan's important points:

1. Oral cultures are analytically distinguishable from "modern" literate cultures.

2. (A completely non-controversial and obvious point): Literate cultures emerged later in human history.

3. The division between oral and literate cultures suggests something about cognition—not necessarily a media-determinism (i.e., of either literate or oral media). At least at this point it can be assumed that orality and literacy involve (not necessarily "determine") cognitive patterns specific to each medium. Because oral and literate cultures can be distinguished, and because of the association of cognitive pattern with culture and medium, it is possible to speak of "oral thinking" or "oral knowing" and "literate thinking" or "literate knowing."

4. Rationality and logic are associated with literacy; naturally-founded metaphor, connection, holism, mythopoeic thinking (in thinking and in the referential terms of discourse) are associated with orality.

5. Oral knowing involves *thinking with* nature, an *acting in* nature, rather than *thinking about* nature or *acting upon* it. Egan's point, I believe, is that when information is primary in thought, natural limits and metaphors become overshadowed and replaced with thinking and with metaphors made possible with new technology and its metaphors (1986:31-34 passim).[10] Oral cultures need nature to think with while literate cultures rely primarily on books. In essence, engagement between natural mind and environment determines an ethic of responsible ecological behavior. Thus thinking nature as story integrates natural place with natural mind to determine a *green* consciousness.

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[10] I do not see that these metaphors have been asked to withstand the scrutiny of a multi-domain validity test as they would have to in Native North American tradition. Therefore, they are under no obligation to serve an ethic across domains and may be poisonous to other domains because their fit is only unidimensional.

6. An essential ethic of conservation and preservation inheres in oral culture's participatory consciousness, one that is not manifest as a structural requirement of literate knowing.

7. The cultural evolution involved in (2) is recapitulated in human ontogeny.

8. The distinctions in (4) above, are not necessarily expressions of oppositions (literacy and orality; logic and mythopoetic thinking, etc.). Rather than being in opposition, they reflect cumulative insights gained through passage through developmental sequences in individual cognitive development. (It is important to note that this in no way implicates individual *moral* development as recapitulative.)

Those points may be seen in this claim:

> It is increasingly clear that the acquisition of literacy can have cognitive effects that have traditionally been considered features of rational thought—particulary those associated with "abstract" thinking. Considering oral cultures, then, may help us to understand better what is entailed in the transition of Western children from orality to literacy. (1987:447)

Recapitulation

The idea of recapitulation appears to be central in Egan's argument, but it is not an idea that is exclusive to him. Ideas about the recapitulation of phylogeny in human ontogeny appear to be deeply embedded in much educational thought. Gould described the concept of recapitulation in educational theories this way, that the idea (from Ernst Haeckel's resurrection of an even older idea) was based on the premise

> that an individual, in its own growth, passes through a series of stages representing *adult* ancestral forms in their correct order—an individual, in short, climbs its own family tree.
>
> > Recapitulation ranks among the most influential ideas of late nineteenth-century science. ...
> >
> > Recapitulation spilled forth from biology to influence several other disciplines in crucial ways. Both Sigmund Freud and C.G. Jung were convinced recapitulationists, and Haeckel's idea played no small role in the development of psychoanalytic theory. (In *Totem and Taboo*, for example, Freud tries to reconstruct human history from a central clue provided by the Oedipus complex of young boys. Freud reasoned that this urge to patricide must reflect an actual event among ancestral adults. Hence, the sons of an ancestral clan must have killed

> their father in order to gain access to women. Many primary-school curriculums of the late nineteenth century were reconstructed in the light of recapitulation. Several school boards prescribed the *Song of Hiawatha* in early grades, reasoning that children, passing through the savage stage of their ancestral past, would identify with it.
>
> Recapitulation also provided an irresistible criterion for any scientist who wanted to rank human groups as higher or lower. The *adults* of *inferior* groups must be like *children* of *superior* groups, for the child represents a primitive adult ancestor. If adult blacks and women are like white male children, then they are living representatives of an ancestral stage in the evolution of white males. An anatomical theory for ranking races—based on entire bodies, not only on heads—had been found.
>
> Recapitulation served as a general theory of biological determinism. All "inferior" groups—races, sexes and classes—were compared with the children of white males. (Gould 1977:114-115)

In Egan's discussion of recapitulation he quotes Plato, in *Timeus* and *The Republic,* to demonstrate a classical distinction between the illiterate knowledge of childhood, *doxa,* or opinion, on the one hand, and *episteme,* or true adult knowledge on the other. Egan characterizes classical distinctions between the two as being achievement of a literate adult rationality which

> entails trying to see things as they are, despite our hopes, fears or intentions regarding them. One may achieve such a view by *theoria* (sight, speculation, contemplation): theoretical understanding results from taking a disengaged perspective. Only the knowledge that results from this kind of intellectual activity ... is true knowledge. (1987:445)

The concept of recapitulation would give a secondary role to orality and the primacy to literacy. When literacy is internalized, Egan (1987:448) suggests, the individual cognitive consequences are fundamental and categorical, and recapitulate in each individual the cultural evolution that produced literate knowing: "By making children literate for example, we are recreating in each individual case, the internalization of technology that can have some quite profound and precise effects on cognitive processes and modes of cognition."

Egan's development theory grows from a critical perspective derived from what he sees as the insufficiently credited role of education set against development theories advanced by Plato, Rosseau, Piaget, Dewey and Whitehead. His theory describes four developmental stages. They are phenomenologically observable, and arise from the way that culture works on the human biological predisposition for maturation. In each stage, education plays a compelling role in assuring progression. Passage through the four stages provides for a cumulative effect, and full development of adults reflects combinations of stages in varying proportions according to the patterns of progress toward maturity.

He states, "Education is being characterized here as a process wherein the individual recapitulates the accumulation or development of sense-making capacities invented and discovered in our cultural history," (Egan 1979:253). Egan's recapitulation scheme is like Rosseau's in recognizing the importance of the organic as fundamental to education. He recognizes the importance of the organic as that developmental force which both finds, and makes its way, in the child. Egan seeks to ally education with that force. In this way the imperatives of "accumulation of knowledge" and "progression of psychological development" are coincident in human development: a biologically- and psychologically-describable developmental sequence is coincident with the acquisition of increasing cognitive facility, and education should be based on those coincident sequences. Varela's and Maturana's (1988) discussion of "self-organization" as being characteristic of living things is instructive here: the process of self-organization goes on as a life process; Egan seems to be saying that observation of those processes shows that they can be effectively categorized in terms of the four developmental stages.

Unlike "culture-epoch" theorists who would refer to separable and distinct periods for recapitulation, the genesis of which is technologically or historically determined, Egan's scheme supposes a cumulative and integrative sequence which does not eliminate the presence of one stage by entry into another stage. The individual making the progression represents the cumulative integration of stages, and the integration allows a new dominant sensibility to develop. Thus his theory permits the presence of the mythic in the rational and permits the "savage" (to use Claude Levi-Strauss's term) to coexist with the "civilized" in consciousness.

Thus, as well, the stage sequence that Egan describes needs to be seen as a continuum because, though it recognizes distinctions between the adult and the child, it requires us to see how they exist together. The recognition that the mythic (the first stage), for example, remains culturally and individually present in the development through the following stages provides an interpretive guide to measure the legitimacy of knowing as it occurs in those subsequent stages. Thereby progression through stages provides a holistic context for maturity. The schema requires recognition of the cognitive characteristics of childhood as contributing to those characteristics that are later characteristically adult: e.g., the mythic stage of childhood is fundamental but it is not supplanted in the adult—it never leaves the psyche, and it is integral to the maturity of adulthood.

The symmetry between biological development and education evolves in the realization that a mind or cognition develops to some degree independently from what it learns (i.e., the mind is not "information"), and to some degree, independently from certain kinds of knowledge that are necessary to the development itself.

Orality is fundamental to childhood in Egan's scheme because its straddles the biological capacity for speech and the technological extension of that capacity as literacy. Within this transition there is also a change in ways of seeing. Note that this is not media- nor cultural-determinism of cognitive pattern: it is a claim for the coexistence of expressive medium, culture, and cognitive pattern, and co-development of that complex of human attributes.

The mythopoeic vision or experience of the world of ages through six, seven, or eight is primarily expressed in story. The definition of this period in developmental discourse has been that it is a period of irrationality and confusion (Egan 1987:446), and so to prescribe literacy as a technological remedy for irrationality. Applied indiscriminately, the oral/literate distinction categorizes the naive oral mind with the mature oral mind, by suggesting that, "Children and 'savages' have often been assumed to lack access to certain forms of thought that are considered the hallmarks of rational adulthood" (Egan 1987:446).

The ingredients of memory in the epic, oral poem or cosmology consist of rhyme, rhythm, formula and story, and so on. These are the patterns of meaning which resonated in the minds of developed oral cultures and one purpose of those structural aspects of memory was attunement with the institutions of their own culture. Thus the idea of resonance *with* something is crucial to Egan's understanding of orality. But Egan believes resonance, connection to environment, to have diminished as literacy liberated mental energy from the tasks of memorization and enabled the exploration of meaning. In this way, Egan recognizes how the coming into being corresponded to the assertion that the appropriate pursuit of the mind is engagement with forms or ideas, as Plato suggests.

It is perhaps here, in educational theory that is an outgrowth of literacy, that Egan locates the essential basis of the contestation of what constitutes the appropriate pursuit of education: one of contextless ideas or one grounded in the context of nature. The latter, as it is expressed by orality, relies heavily on its potential for enchantment, by drawing listeners into the world of story. The former becomes an intellect empowered by literacy and its attendant rationalism and, in a sense, is placeless.

The centrality of participation in the making of meaning in oral culture is also recognized as a feature distinguishing oral cultures. Of the epistemology of this difference, Egan quotes Frankfort, Wilson, and Jacobsen, "The mainspring of the acts, thoughts, and feelings of early man was the conviction that the divine was immanent in nature, and nature intimately connected with society," (Egan 1987:457). And Egan writes:

> All the attempts to pinpoint the causes and character of this sense of participation in nature display a conviction that, despite their inadequacies when it comes to pragmatic control *over* the world, myth and consciousness in oral cultures somehow enable people to feel that they are comfortable participants in their life world. ... One of the

> cornerstones of Western rationality is knowing where we end and the world begins: distinguishing the world of our feelings, hopes, fears, and so on. This form of thinking seems to be very largely a product of literacy. (1987:457)

Egan suggests that there is an aliveness or quality of soul (1987:458) that is represented in the living word which is not present in the written word. In accepting the interconnectedness of the spoken to the cosmos, Egan recognizes the relationship of the oral to the concrete; that is, the essential relationship of word to thing, which literate culture accepts through its recapture as poetry. An adult in a literate culture and a child in an oral culture have something in common, but Egan's point is not that the content of thought is the basis of distinction, nor the sophistication nor complexity of thought: what they have in common is "*what they think with*" (1987:463).

The common characteristic between these two groups is story. But the ability to think with story is not something that oral cultures necessarily give up in acquiring literacy. The lived experience of orality is fundamental to human culture and communication is fundamental to life but under the pressure of positivism, legitimation of the literate devalued lived experience. The problem is one of legitimacy and primacy: the literacy and rational prose that are extensions of what Egan credits Vico as calling "poetic nature," haunt, if not displace, this original, positive condition (Egan 1987:465).

The Stages and The Story

Mythic

Story has a cognitive primacy for Egan. It is foundational to his theory of development, and that is best revealed in his description of the first stage, the mythic. Through the ages of six, seven or eight, story is most appealing in its content of "weird creatures" set in "exotic times and places" and involving "powerful and pure emotions and forces in conflicts that are clearly resolved" as these occur in a context that is local and provincial (1989:247-248). Egan suggests that the omnipotence of the story lies in its ability to "fix the meaning of incidents in stories" by

> (The) general organizing function, whether syntax or plot, that reduces the huge number of possible meanings of the smaller elements to one for each element, and they thus agglomerate into an unambiguous larger unit with a precise but complex meaning. (1989:248)

By "fixing affective meaning of events," story "offers a haven of clarity" in a world of puzzling events and incidents (1989:249). The world is an extension of self. Thus, story is able to offer a causality, often in the form of binary oppositions, to what things are and why they happen. Yet their intellectual dimensions as content are less well understood than their significance as form, as story. The mythic is an enthralment with a form, a way of seeing that is little concerned with what Egan calls "the possible," but which honours intersubjectivity with surroundings.

Romantic

The romantic stage, from ages 8 (approximately) to 15, 16, or 17, is also intricately enmeshed in story but in a form which, rather than creating affective meaning out of surroundings, seeks to particularize knowledge of aspects of the realistic. The world is no longer wholly an extension of self but is increasingly seen as being autonomous. Egan writes "The capacity to associate oneself with powerful forces, characters, movements, ideas seems to be a development of the mythic capacity to connect with the world best through known emotions and bases of morality," (1979:30). The romantic being more sophisticated than the mythic, Egan describes the stories most suited to the romantic mind:

> They are not realistic in the sense of seeking to be literally true, but they are concerned always with to be *possible* within the real world. Even in stories such as "Superman," there is considerable energy devoted to his etiology. It would be insufficient in the romantic paradigm for him to have supernatural powers by magic; there has to be some explanation of accounting of the magic. (1989:251)

Romantic stories have a tendency to pit hero(ine) "against odds to a glory and transcendence over threatening nature" with locations in "plausible and realistic but exotic settings," under the increasing scrutiny of a sense of realism concerned with "the extremes, the limits, of reality on the most exotic and romantic content" under the development of "realistic mastery of concepts of historical causality, geographical space, and abstract logical relationships ... myth confined within reality," (1989:250-251). This leads to a discovery of the "autonomous" world which lacks magic and which works according to its own rules; and so the heroic element of the romantic period is fashioned from within the boundaries of those forces of which the student is becoming aware that he/she is determined by.

Philosophic

The philosophic stage develops in the late teens and into the twenties. It goes beyond the obsessions of wanting to know about the exotic and extreme dimensions of the realistic by its concentration on discovering patterns of which the student is a part, and which offers the truth about these processes. Minding Aristotle, Egan explains that this interest can be expressed as in *what happens* rather than in *what happened* (1989:253). In the desire to know the "truth of what happens" the philosophic mind is concerned with ideas such as "society," "culture," "the mind," "evolution," "human nature," and so forth (1989:253). Compelled by the desire for argument, theory takes on an important interest. He further elaborates on the diminishing primacy of influence that story has previously enjoyed:

> What we see in moving from the mythic to the romantic to the philosophic stage is a reduction in the simplicity and determining force of the story form. Although the form is so weakened by the philosophic stage that we normally do not recognize it, exposing its persisting force seems important because of the implication for organizing material so that it is best understood and used by students. As shown above, the story form is different from reality in that it *ends*; reality goes on, and we are in "the middest." (Egan 1979:69)

Ironic

The ironic stage, the stage of maturity, is that time when the truth of the philosophic stage is put to the test of reality. Particulars again determine the generalism of theory, though philosophic shortcomings are, in part, established by their very generality. So the ironic creates a renewal of particularism. New schemes are not so much built on the notion of their truth or falsehood as on their qualities of being "useful, beautiful or elegant—or their opposites," (1989:254). Unlike indigenous tradition that awards an esteem to the elder as storyteller, Egan's model is more referential to cognitive qualities than to the performance of story, and so the relations this establishes with youngers.

Egan concludes his exposition of stage development by reinforcing the cumulative effect of the progression, and so is able to reconcile the retention of the mythic, romantic, and philosophic, along with the ironic:

> Education is a cumulative process, so these stages are not stages one leaves behind. Rather, each one contributes to the developing understanding. Properly, the mythic stage contributes imagination, the romantic stage contributes a vivifying association with knowledge; the philosophic stage contributes the tools for searching for more general meaning, for pattern and theory construction; and the ironic stage represents the regulator of these, along with an appreciation that life and the world are made up of particulars and the coalescence of these is into more and more general forms is the contribution of our minds. (1989:254)

Egan's scheme has as its purpose a "prescription for how to become literate," (1989:255). The importance of the theoretical recognition that maturity represents a cumulative result of progression through stages is that in the agenda which such recognition requires of a responsibility for care and nurturance of the child that is appropriate to each stage, and stage-specific. Fulfilment in each stage allows the self-generating properties of human nature its due, without overpowering the child or the process.

Rationality and Literacy

The theoretical importance of this work seems to be in its exposition of a developmental framework wherein the mythopoeic and the rational harmoniously coexist. It is in their coexistence that Egan's theory is broadly symmetrical with native traditions. The theoretical precision with which Egan understands the interplay of the mythopoeic and rational informs an understanding of the human place and the human way in nature. This is fundamental to the greater task of resolving the dichotomies of mind and place, the physical and the psychological, because the model ultimately guides the understanding of place in the construction of mind through story. It does so by demonstrating that maturation is reciprocal to the relationship of mind with nature.

By way of implication, Egan's theory is important in understanding how we have let the primacy of story decline in the philosophic phase. By employing the rational and the linear to challenge the mythic and the romantic, the philosophic person too seeks nurturance for its thought style. If this person is able to find this nutrition in their past and their place, then they will be less vulnerable to the seductions of the cosmology of modernism that Oliver and Gershman (1989) and Borgmann (1984) so warn against. Unless the romantic and mythic are renewed in their respective stages, and as component parts of the adult, they can become emaciated and become sufficiently weakened as to be vulnerable to the legitimated disintegration and deconstructive imperatives of the philosophic stage, and fall under the hegemonic legitimacies of positivism. Grounded education, to employ Oliver and Gershman's (1989) term, provides the rudder to navigate the "alphabet soup" that contemporary education offers when out of sympathetic touch with place.

The Posture of Rationality and Literacy in Education

At the same time as he confirms a history of educational thought, that literacy and rationality go hand in hand, Egan must take issue with the idea of the primacy of literacy for rational thought. In fact, the issue becomes one of legitimacy, and the processes by which a culture (i.e., Western culture) legitimates a way of thinking, its own.

In his 1987 article, "Literacy and the Oral Foundations of Education," Egan's argument demonstrates the educational legitimacy of orality as the appropriate vehicle for environmental education and the inner wild. In creating a counterpoint to the integrative and interconnectedness of the epistemologies of orality, he discusses rationality in its capacity to speak to both the true nature of reality and, by extension, the true reality of nature. He summarizes education scholarship:

> Rationality entails trying to perceive things as they are, despite our hopes, fears or intentions regarding them. One may achieve such a view by *theoria* (sight, speculation, contemplation): *theoretical* understanding results from taking a disengaged perspective. Only the

> knowledge that results from this kind of intellectual activity ... is true knowledge. (p. 445)

And further:

> This rational theoretical understanding ... gives a superior view of reality. (p. 445)

And finally:

> [Rationality] proved a convenient tool for dismissing from serious comparison with Western forms of thought those forms of "primitive" thought that expanding colonial empires, early anthropological studies, and travellers tales were bringing increasingly to the attention of Europeans and North Americans. (p. 446)

As a technique for the discovery of the reality of reality, the idea of rationality also established irrationality, and Egan gives a short tour of the purposes to which the concept of irrationality has been employed to denigrate children and the non-Western. Yet the assumed symmetry of the irrational and wild, and rational and civilized, give way to the belief that nature is irrational until humanized—that is, rationalized. Hence, non-technological conditions, nature being a prime example, are irrational until conceived with and within the techniques that reveal them in terms of rationality, or are discovered to be discernable with rationality. While the irrational is theoretically permitted in the admission of what comprises mind, in educational practice irrationality constitutes a penalty in the expression of thought. This is because the correspondence between literacy and rationality is so closely linked as to give rise to the interpretation that rationality is an inseparable feature of literacy, instead of seeing how the technical rationalism of positivistic science legitimizes a rationality consistent with its own epistemology.

Story, First Nations "Oral" Cultures, and Environmental Education

Even though ideas about recapitulation of cultural history in human ontogeny may not be the most appropriate model for describing human development, there is a certain appeal for maintaining an analogous distinction between oral and literature cultures on the one hand and child and adult on the other. That analogy contributes to the description of normative distinctions between child and adult. Egan writes, "Children are assumed to begin life in irrational confusion and ignorance, and education is regarded as the process of inculcating both rationality and knowledge" (1987:446). The uneducated (that is, the oral and pre-literate) are assumed to represent predominantly mythical rather than analytical or rational mind. Their primary mechanism of orality-based thought, the story, becomes synonymous with the young and the irrational, the non-literate adult and with nature itself. The difference on the continuum of adult, analytic rationality and natural, childish, story is explained in terms of a dualism:

> One of the cornerstones of Western rationality is knowing, as it were, where we end and the world begins: distinguishing the world from our feelings, hopes, fears and so on. This form of thinking seems to be very largely a product of literacy. (1987:457)

This separation achieved through literacy—a posture of media-determinism—offers bleak prospects for environmental education ever subscribing to spiritual and factual epistemologies of interconnection.[11] Attributing disengaged and critical intellect to the literate mind, as a good thing, suggests an incapacity on the part of the oral mind: [in oral cultures] "words typically are not themselves objects of reflection, and thus oral cultures have no epistemology as we might define it" (Egan:1987).

Yet this issue of epistemology is made clearer when the idea of knowledge or truth is understood to be "inseparable from the media used to define it" (Postman 1985:17). Literate epistemology, it is said, is not compelled to be locally referential while in non-literate culture, "the meaning of each word is ratified by a succession of concrete situations" (Egan 1987:458 quoting Goody & Watt 1968:306).

By thinking with local landscape the condition of inseparability is evident, and forms the *epistemological* basis for constructing metaphors that are valid in multiple domains. One may not think with the goat without thinking of the grass and the ground; cosmologies favouring this ethic will have to be inclusive of the ground and its processes upon which one stands. Far from having "no epistemology," the requirement for localization reflects a cultural condition attributed to "oral cultures" as being "intellectually inclined toward homeostasis, conservatism, and stability in ways that literate culture is not" (Egan 1987:459 quoting Geertz 1973). In erecting oral expressive systems that must fit with natural processes in several domains, there is both a necessary reflection on the word and the grammar of the language to honor the surroundings and the natural processes therein. Benjamin Lee Whorf's discussion of the metaphysical structure which inheres in Hopi language evidences the considerable reflection that prefigures words. Here I quote from an introduction to Whorf's writings:

> The thoughts of a Hopi about events always include *both* space and time, for neither is found alone in his world view. Thus his language gets along adequately without tenses for its verbs and permits him to think habitually in terms of space-time. Properly to understand Einstein's relativity a Westerner must abandon his spoken tongue and take to the language of calculus. But a Hopi, Whorf implies, has a sort of calculus built into him. (1988:viii)

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[11] Media-determinism is not without support in the anthropological record, as demonstrated in a statement attributed to an Ojibwa Indian recorded by Jenness, "The white man writes everything down in a book so it won't be forgotten; but our ancestors married the animals, learned their ways, and passed on the knowledge from one generation to another" (Egan 1987:457 quoting Levi-Strauss 1966:37).

And quoting Whorf himself:

> Does the Hopi language show here a higher plane of thinking, a more rational analysis of situations than our vaunted English ? Of course, it does. In this field and in various others, English compared to Hopi is like a bludgeon compared to a rapier. (1988:ix)

It is alluring to suggest that First Nations cultures, having constructed a complex language that is symmetrical with the indescribable complexity of nature, has allowed for the discovery of principles that guide the identity between nature and language. But this also means recognizing what is inviolate in that relationship. One of those things is that we must live here to love it in ways that are deep with responsibility and intimate knowledge, for that is what being in a place is meant to be. It is not meant to be that those who do not live there and do not know what works or belongs there should control its destiny or its meaning, whether that be designation as resource, scenery or epic poem. The question, however great the allure of supposing that the ethic originates in language, seems to be about the origin of the ethos.

It may be that Egan suggests that the ethos originates in language and media: oral cultures, constrained to refer to physical place, are less able to represent other things abstractly. That leads to a pass wherein the substance of the argument is simply not tenable. No one, nowadays, could maintain that oral cultures predispose or equip individuals less adequately for abstract thinking than do literate cultures. Such a trope in argument must represent a misapprehension of Egan's thesis.

If the cognitive consequence of oral, participatory consciousness is not "in their incapability for abstraction, but in our dissociation from the lifeworld" (Egan 1987:461), then Egan's substantial addition to the theory of environmental education is found in the appropriateness of poetry and story as symbol systems honoring connection between self with place both in form and content. Yet, this recognition is made unnecessarily problematic by stage and recapitulation theory, for it suggests story, and ultimately land itself, becomes abandoned as primitive. Comparative demonstration of the ecological wisdom of many preliterate cultures, and the complicity of rational Western thought in global environmental degradation, erect severe impediments to any idea of a superior literate intellect. Surely the archaeological record shows that some cultures that did not have writing simply scarified their localities and abused their earth; and many cultures that possessed writing—e.g., the Aryans of India—developed spiritually-based environmental ethos.

A comparatively superior environmental ethic cannot be attributed to the medium of discourse. To do so would disallow the oral content that possesses an arguably more rational approach to nature (rational in the sense of realizing that because everything is connected to everything else, no expression of reality may truncate the interconnection without thereby breaking the fundamental unity it is there to honor). Dispassionate "rationality's" central condition, the imposition of limits, truncates interconnection by the deception of its artifice of non-engagement. Rationality-as-limit is a technique for environmental education, but its role is primarily consistent with reasoning information, where artificial reference to the autonomy of natural systems vis-a-vis humans confirm a disjunction in reference, not in fact.

A bias in media may not be from the essential similarity of "rationality" with "literacy," but may arise from the same characteristic of literacy: print may move between contexts, and its experience has no necessary and immediate reference to the context in which it is experienced. That has led to its association with objectivity and rationality, but the point here is that it has also led to its possible obviation of place as central to the meaning of discourse.

That raises an interesting question. Can someone who is aware of media bias, but also aware of the requirement in "oral" tradition for the connectedness of discourse to place, so construct an environmental education that media bias could be accounted for? Paraphrased and made more specific, the question might be "Can people from a culture with an orality-based discourse style contribute to a redefinition of a literate-based environmental education?". And the further question may be "What part should story have in such a redefinition?". Asking that question in our own place provides a further paraphrase: can we learn an environmental educational method regarding stories, based on the educational method of storytelling by North American First Nations? That may be the question that directs the adoption of new educational strategies. The truly philosophical question, however, remains the origin of First Nations' ethos.[12]

Our current environmental education is based on the creation, management, and transmission of information. That assumes a canon of information for presentation. The complement of that approach would be to concentrate on providing an experience of an environment in which natural processes and personal interactions with those natural processes would create personal knowledge and affect about the environment and the human place in it. Egan's justification of the use of story in education provides a rationale for making oral story the central methodological construct for engagement with the physical reality of environment: story is a kind of experiential education. At its fullest realization, given that individual maturity reflects a conflation of Egan's stages, storytelling would provide for Leopold's diversity ethic[13] on the level of reasoning, because it appears to have the potential to engage all human domains of mind, body, and spirit in symbiotic, autopoieic cross-fertilization with the domains of nature. The physicality of story empowers its capacity to be experiential.

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[12] It is not a question that I am qualified to address, except to examine the implication that the ethos of conservation and compassionate connection amongst all living things and Earth arises from the use of a medium of expression.

[13] Aldo Leopold originated a phrase that resonates with Native North American sensibility, "A thing is right when it tends to preserve the integrity, stability and beauty of the biotic community. It is wrong when it tends otherwise," (1952:224, 225).

And here we part with Egan fundamentally, because honoring the principle of interconnection opposes Egan's judgement that, unlike life and history, "stories end" (1986:30).

It would appear that Egan believes that story is decreasingly appropriate for the latter stages, that it is at its most effective in mythic and romantic stages, and that philosophic and ironic stages enjoy a kind of superstructure on that foundation, a superstructure that informs myth and story with an interpretation based on first rationality, then irony. There is a time to look back to story, from a rational or ironic perspective, to understand it. Consistent with the idea that story, like childhood, ends in the coming of adulthood, Egan appears to see education as contributing to the developmental growth from a proto-rationality into rationality.

There is a completely different, but possibly complementary, perspective on story. It is interesting to observe its complementarity with Egan's model.

First Nations Stories

In another work (Sheridan 1994b) in which I explored Elder Raven Mackinaw's resolution of dualism, I discussed the following principles, most coherently articulated by Walter Lightning (1993), as those principles inform First Nations storytelling. They are presented here, articulated in somewhat different order and in somewhat different terms, as principles to bear in mind while reviewing (a) the need for the holistic method in environmental education; along with (b) Kieran Egan's compelling direction to story as educational method. Some principles of First Nations storytelling are

1. Storytelling is based on authority, and the authority is manifest in appropriate protocols.
2. Storytelling is localized; story deals with specific places.
3. Each narrative is at the same time (a) specific to the interactants and their setting; and (b) in a sense, canonical: there is a canon of knowledge that is available in story, even though it is realized, as unique to setting and interactants, in all its realizations (performances).
4. The relationship amongst storytellers (Elders) and hearers is a personal one; it does not involve just processes of "information transfer" but "information creation," the personal understanding of information as well as the creation of new information. The relationship between interactants must be one that we can describe as "compassionate," even when the message is a difficult one.
5. Stories "unfold": part of the check of their validity is that they unfold so that the meaning is coherent with the environment (empirical validity) and internally coherent, at all levels of interpretation of story. (The cultural systems for unfolding involve metaphor, metonymy, synecdoche, and implicature.)

6. The "unfolding" of the stories anticipates patterns of individual development, including but not restricted to processes of physical maturation: a single story can unfold over many years and provide insight and information at all levels of maturation and growth.
7. The story, and the way it is told, are seen to have effects far beyond the immediate.
8. The canon of story and performance are both based on, or are part of, an ethos. It is an ethos of
   (a) the connectedness of all things;
   (b) a spirituality that ascribes an intelligence to the unity of creation; an intelligence that has a personal relationship (identity) with each individual; and so;
   (c) harmony and balance as a principle of connection.

   The representation of the ethos is tacit (i.e., you don't tell people about the ethos), you live and do the ethos. The doing integrates self and other, self and environment.

The principles listed above as (5) and (6), that stories "unfold" in meaning, over time, have a direct bearing on (a) Egan's dictum that "stories end;" (b) his subscription to a scheme in which the primacy of story is in the mythic and romantic stages (even as those stages are incorporated in the mature adult); and (c) the supposition that literacy informs a rational basis for description and analysis, as a progression from a story-based prior stage. The unfolding of stories in First Nations tradition represents a fundamentally different way of looking at all of these things: the appropriateness of story to information and age level; the maturational process, over time; and empirical validity—"rationality"—abstract epistemological systematization of observed phenomena.

The First Nations point of view would have it that a story, as a story, fits its place and time, with respect to the specific participants to its realization ("performance"). And as a version of a story is retold, or as an individual applies the story to observed phenomena, it "unfolds" new—specific—system of meaning. Wapaskwan gives an example of this: a story heard in childhood is realized, years later, to contain a topographical description of a specific major watershed of North America; and years later, to represent a systematization of responsibilities between kinsfolk. Neither would be expected to be apprehended when the story was first heard, but the coherence of the symbol system in the first telling of the story, with a large symbolic context acquired during maturation, provides for the stories "unfolding."

From such accounts by First Nations people, I will anticipate a First Nations response to Egan's idea of the stages: if we characterize human development with reference to those stages, a single powerful story takes us all the way to irony and beyond. Its first interpretation may be "mythic," and then "romantic." A further interpretation may certainly be "philosophical," i.e., abstract representation—even dispassionate and "context-free" abstraction about conceptual relationships. The truths evident in story are testable. That is not the point. The truths evident in story are *expected to be tested*. The authority of the storyteller, his or her exceptional vulnerability to challenge, are precisely there: the evidence for lack of authority and violation of the ethos is the very demonstration of (a) lack of coherence with an systematic epistemology; or (b) lack of coherence with observed reality. Lightning (1993) says that story is about truth.

Childhood, like myth, as Wapaskwan (quoted in Lightning 1993) demonstrates, unfolds. Like myth, childhood is sacred precisely because it accomplishes autopoiesis, the beholding of one's self through the integration of one's surroundings as a component part of that identity. The realization of the maturity of this capacity becomes the content of those metaphors which transverse childhood and adulthood. Hence, there is no reason to abandon story precisely because myth, childhood, and meaning unfold together to a perception of the source of their beginnings.

An application to environmental education comes here: because part of the evidence of this origin is the living land, it becomes necessary to examine how land also unfolds across the mental, spiritual, and physical domains.

Another apparent difference between Egan and the First Nations principles I have listed has to do with ethos. Egan sees an ethos of conservation inherent in oral cultures, because of its requirement for localization and identity with land. First Nations epistemology does not attribute an origin to the ethos: it is the other way 'round. An ethos is self-evident in the connectedness amongst people and in the identity of people with land, but that self-evidence demonstrates the primacy of the ethos—not the generation of an ethos, an ethics, or a morality—from either a medium or from metaphysics. It is possible to get the stories wrong; it is possible to violate the ethos, the land, the story, the principle of compassionate relationships with others and with place. (The ethos of connectedness and harmony are expressible in spiritual terms, but a spiritual domain is simply aspectual: things are never "just" spiritual, or physical, or mental, or cognitive, or whatever.)

Walking and Talking: Does Egan's Theory Take Us To A Sound Environmental Education?

Egan's crediting of the oral medium and storytelling as vital to a profound ethic of care for place contributes in a most important way to an overdue intercultural foundation for Canadian settler culture's environmental education. Although his weakness, like my own, has been overvaluing Native North American medium, orality, at the expense of its ethos and cultural content, that fault has not been harshly judged by the Native academic community. It could be. What Egan's theory accomplishes is a demonstration of a correspondence between how something is known and relative engagement with the knowing of it. He points to a symmetry between what that known thing is, and the symbolic representation of it, in terms of whether or not the knowing honors the character of the known. He shows how engagement with either the symbolic structure or the reality it describes can preserve those qualities that are fundamental to the harmonious connection between analytical domains in which metaphor works.

He directs us, in fact if not explicitly, to examine First Nations storytelling, and to honour its potential for informing environmental education.

Starting with Your Place's Stories

So we are drawn back to First Nation story. But just as it is obviously wrong to concentrate on story as wholly text-centric and thus to exclude its sacramental relation to surroundings, it is equally wrong to assume Native North American story traditions are, like text, accessible and transportable, so accessible to non-Natives. The full intelligence of Native tradition cannot be revealed to non-Natives (or to anyone for that matter, without protocol and authority) and any enterprise meant to get at First Nations wisdom, as textual meaning independent of place and authority, misapprehends it.

For settler culture there is an undeniable seduction and comfort in discovering a sacramental story tradition and a cosmology that refers to the awesome grandeur of this continent, because we live here. Yet First Nations story, while it may provide a model for environmental education, is not accessible *as* environmental education.

For an encompassing and healthy environmental education it is imperative to learn the principles to live in our own indigenous stories. To suggest otherwise negates the settler heritage of having been themselves an indigenous people, possessing their own ecological and mythic heritage. Recognizing the possibility and importance of understanding our own mythic, romantic, philosophic, and ironic traditions through the medium of story is an important, exciting and even sacramental prospect. It further establishes indigenous storytelling tradition as an indispensable source of inspiration for the restoration of mythic land consciousness for North America. Demonstrating what it is like to restore "place" and "being in place" to mythic traditions will require settler culture to restore to mind a quality of place and to place a quality of mind[14] that can be allegorically likened to the sowing of indigenous seeds on a lawn long colonized by Kentucky bluegrass. Putting mind in place and place in mind sends us back to the anthropological record on participatory consciousness.

Egan has demonstrated that the quality of mind which drives participatory consciousness is that which is most essential to ecologically ethical behavior. In effect, children are born with a seed of understanding that knowing nature is implicit in knowing self; further, in the way they start to learn about themselves, thinking in metaphor and by comprehension through story, they are gifted with that symbol system that most honors their experience of inseparably being *in* nature as part of who they are.

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[14] I am thankful to Dr. Stanley Wilson for sharing his fieldwork in the spiritual matter of how language inhabits certain places where words are spoken and how this lasting phenomena resonates with those speaking the same tongue to produce a sense of empowered dialogue.

Modern education, as Egan warns, is culpable for intentionally trying to rid the child of those capacities most convivial with individual and environmental health, and with compassionate mind. The irony arises that education's manufacture of what it sees as its most coveted stage of intellectual development, rational adulthood, at the same time may be its most ecologically destructive achievement.

Adulthood and Rationality: Separation from Place and Story is Separation From Childhood

One of the things we find in going to our own traditions is that we separate childhood from adulthood based on a diagnostic of rationality. Egan's stages of development accord rationality to adults. He may argue for the retention of the mythic and romantic in adulthood, but making rationality definitive of adulthood (and that, of course, in the context of recapitulation of stages of cultural evolution) leaves us with the possibility of maintaining that familiar analogy, childhood and orality as pre-rational, and adulthood along with literacy, as rational. Childhood and adulthood are fundamentally different, dichotomous, and the definitive difference is rationality and literacy.

Paul Shepard's (1982) exhaustive treatment of environmental adolescence posits a kind of recapitulation theory; he claims that modernity is intractably stranded in the self-absorption particular to a "stage" of "adolescence." This condition, he theorizes, follows historically and morally from the practice of agriculture, itself a retreat from an earlier ecological *maturity* in the hunter-gatherer relationship with nature. The practices of intervention in nature that exploit and transform it into a purely human commodity are those he sees as synonymous with agriculture. His prescriptive solutions are based on an idea about moral development, eventually to achieve a recognition of the duality of "autonomy and symbiosis" (1982:111). Shepard's hypothesis of a separation of adult sensibility from childhood creates a basic criterion of eligibility for planetary management. He suggests, thus, that we are now in a phase of moral deficiency—deficient because of self-absorption and allowance of self-absorbed intervention in natural processes—quite the opposite of the idea of a kind of triumphal cultural, moral, and intellectual (i.e., "rational") maturity, where autonomous adults control things.

The idea of a desirable and autonomous adulthood, able to act independently and to control nature, children, and irrational self, is consistent with an ethos of fragmentation, a concept that Gilligan (1982) argues may be a key to understanding modernism's cosmology. Gilligan also critiques the accreditation of autonomy and independence as a developmental zenith in Kohlberg's (1981, 1984) influential moral development theories. She suggests instead that most developmental theory represents a male psychic development,[15] grounded in separation and domination rather than in cooperation. Gilligan moreover advances the belief that healthy and essential ways of relating would condemn Kohlberg's assumptions of normative maturity-through-autonomy. Oliver and Gershman make that same ethic of relationship a key one in their idea of process philosophy, in keeping with natural principles also espoused by eco-feminists and deep ecologists. They write:

> Reality lies in (these) relationships, it *is* the relationships. ... An actual engagement is engaging in relationships. It is process. ... Its being is constituted by its becoming. (1989:116)

Oliver and Gershman exhort readers to consider curriculum and development in this sense as a participatory and transformative process: "deep participation in our own becoming lies at the very heart of education" (1989:193). But the question remains, if the transformation from participation to independence contradicts healthy environmental ethos, then normative differentiations between adulthood and childhood demand redefinition. Egan helps us here.

Normative environmental education's definition of connection in terms of separation—that is, using information to intervene between self and nature—contributes to the maintenance of a false dichotomy, rather than the recognition of a continuum, between child and adult. Children are disallowed to challenge the pretensions of that separation manufactured by information because of their general inability to read at adult levels.

Information-based environmental education contributes to the dualism of nature and culture, the natural and the human. In recognizing that pretentiously rational, information-based environmental education operates on that dualistic premise of separation, we are drawn to story for remedy. It is in story that we might recognize, value, endorse, and work with the participatory consciousness of childhood, and honor that participatory consciousness as it matures. Linda Akan (1993) describes how Elders teach, moving verbally between the domains of the physical and the spiritual. It is a perspective in which there is no necessary dichotomy between childhood and adulthood. The teaching technique works for both:

> A teacher is continually drawing a verbal spiral of existence for learners to see, read, hear, and think about. Teaching through talking is tracing the great chain of being with words; it is providing a cognitive map so students can mentally walk around in life. Conceptually, the Elder advised me to "go underground" so that I could hear the real message of the Earth—the place of our origin, our present location, and our future survival. (1993:211)

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[15] It is important to recognize that Gilligan's methodological determinations of the difference between male and female development are not interculturally based.

This represents a praxis and health as it offers a solution to the problems of dualism (between any dual permutation of physical, spiritual, mental and cognitive domains; between childhood and adulthood; between nature and culture; between "rational" and non-rational). This is also the claim that the experience of story and place has effects that will be felt long beyond the immediate: an impossibility relative to information, which need not be localized with respect to place.

Admission that the perceptions of childhood and myth reveal a world substantially in keeping with nature's most overlooked and fundamental processes contextualizes the shortcomings of informational rationality. A non-dualist ecology of knowing permits rationality an operational and provisional place in a psychological and environmentally symmetrical whole that is not overwhelmed by the presence of an overlegitimated rationality. Balanced by what it is not, informational rationality can honor the mediated perception of reality in ways that myth does not without necessarily invalidating mythic representation. The problem arises when claims to exclusivity—the absolute priority of informational, ethically-neutral, information—create an imbalance. Claims of this nature are favoured when environmental education is information driven because this directly demonstrates the singularity of rationality and runs the risk of tracing instead an earth dissociated solipsism. Yet these imbalances must recover their balance, perhaps not their original balance, but a balance that accommodates informational rationality sufficiently grounded to permit the spiritual principle of love to be the heart of nature traditions. Love is the ethos which bridges between domains.

The question is still the priority of the ethos. The story is an effective teaching strategy in the "oral" cultures of the First Nations, not because of the medium itself, nor because of the epistemological constraint to refer to place. It is because story in First Nations cultures recognizes the priority of the ethos of love, connectedness, harmony, and human identity with natural processes. Story remains an effective teaching strategy in First Nations cultures because, structurally, it is consistent with that ethos in its obviation of dualism. What we learn is that the ethos is the priority.

Toward Resolution: Egan and Storytelling and Environmental Education

The formal expression of Egan's schema (described, beginning on page 120 of this work, with eight statements), requires formal address from the perspective provided by First Nations story.

The first two statements were that (1) oral cultures are analytically distinguishable from "modern" literate cultures; and that (2) literate cultures emerged later in human history. As long as the categorical distinctions are abstract, operational, and analytical, the distinctions between cultures can be maintained, but we run into serious trouble when arguments about determinism are invoked.

The third, fourth, and fifth statements (that there are at least cognitive consequences of literacy and orality; that there are fundamentally different ways of thinking associated with each of those culturally-modal media; that literacy is associated with logic, rationality, analytic segmentation and abstraction, and that orality is associated with mythopoetic thinking, connection, and holism) require formal summary address, based on the discussion in this paper.

First Nations people now read, and have done so for some several hundred years at least. There is good evidence that many groups were in fact literate before contact with European settlers.[16] They also maintain their tradition of oral storytelling. How can the two be necessarily incompatible, or at the very least, conflictual? That is not the main point of argument, however. The first point is that the exclusive dualism in categories cannot be maintained. The second point is that those statements are at least operationally deterministic, and that that determinism cannot be demonstrated. The third point is that the distinctions between "rationality" and "non-rationality" cannot be demonstrated to inhere in either medium nor in either culture. Another First Nations response to these points was in Wapaskwan's (pers. comm.) statement: "Indians read the land. There is nothing keeping anyone else from reading land."

The sixth point summarizing Egan (p. 121 herein) was that there has been an ethic of conservation and preservation that inheres in oral culture's participatory consciousness. I have been at pains to suggest in this paper that the ethic cannot be demonstrated to arise from the medium, but that the priority of the ethic is one aspect of the genius of First Nations.

The seventh statement (p. 121 herein) characterizing Egan's scheme was that cultural evolution is recapitulated in human ontogeny. Recapitulation theory may work as an ill-fitting analogous model, but it is ill-fitting.

And the eighth statement about Egan's work is this:

> The distinctions . . . are not necessarily expressions of oppositions (literacy and orality; logic and mythopoetic thinking, etc.). Rather than being in opposition, they reflect cumulative insights gained through passage through developmental sequences in individual cognitive development. (It is important to note that this in no way implicates individual *moral* development as recapitulative.)

It is Egan's demonstration of the appropriateness of storytelling as a medium for engagement, its potential as foundational for a more nearly natural education, along with this eighth statement of the cumulative nature of knowledge gained through story, that is useful for environmental education.

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[16] For example, it is clear literacy in syllabics amongst the Inuit of the Eastern Arctic in Canada predated sustained European contact. It is also clear that several nations had writing systems that predated European migration. The MiqMaq, for example, have an ancient and elaborate ideational system, modified with diacritics for tense and aspect. There is a widespread claim for the indigenous development, in antiquity, of the principle of a phonetics-based syllabics in Algonquian-family nations. And then there are the Maya.

Egan's proposals about teaching and storytelling direct us to examine current practice. His scheme speaks to these issues

1. There is information in story. Story can provide us with knowledge about
    (a) the environment; and
    (b) human activity that affects the environment.
2. Egan addresses the question of human cognitive and affective development with reference to stages, which he identifies with stages of evolutionary development of human society.
3. The ethic in Egan is not neutral: it is one of valuing individual knowledge and the process of learning through identity with text and textual meaning.
4. The ethic can thus can provide direction to "connectedness" and "wholeness" (i.e.), to the realization that learning takes place in coincidentally cognitive, emotional, and physical ways, and an individual engaged is storytelling learns a complex of things, about a complex of world.)

The objective of storytelling, with reference to environmental education, would be to reconcile the disjunction between "human activity outside nature" and "natural processes": story should be able to deal with nature and with environment in a way that makes us part of the environment.

I believe we can find these principles from Egan's work, considered especially of his implicit direction to go to First Nations story for example, for environmental education:

1. We recognize that we deal with a complex system of representation that has to be manageable and understandable.

2. These observations direct us to deal with specific localities, specific real places, and to the realization that complex abstract relationships can be approached first through participation in specific locales and places.

3. We need an approach in which learners create their own knowledge, based on observation, of their own places; and further, an approach in which we can come to the realization of our own identity with place.

4. We need to look at our own ethos, and find in it the traditions of a connectedness, the nature of that connectedness being expressed in terms of compassion.

Conclusion

We have assumed that children and adults get engaged, naturally, with good stories. We do not need to be taught how to listen to, and participate in, stories. What we need are good stories that come from an ethic of love for the Earth (and for each other).

We need to establish a storytelling in environmental education that actualizes the reality of the interconnections of nature. They must be stories that unfold across time and place and so permit the depth of the insight of story and place and person to also unfold. In re-establishing the validity of an ancient methodology of apprehension and perception, legitimation of storytelling restores us to a holism that has been fragmented by the rise of "modernity." Yet it asserts no particular meaning other than expecting that each place will grow its own meaning, and that these meanings, if they are aligned with the ethic (that is, if people get them right) can allow for the insight that they are all the same story, just as places are together all the same place. This approach does away with the idea of wilderness and wild minds as being *other*. The right stories may contribute toward an ethic of peace and acceptance, of belonging and relation, that may be of inestimable value across intercultural, personal, and ecological domains. Learning to honor self and place as an indivisible unity requires intimate familiarity with mind and place.

Kieran Egan's theory, even stripped of its recapitulation and determinism, accomplishes an escape from the information maelstrom and a return to talking and walking sacred pathways.

Egan's direction to storytelling can take us to the exemplars in First Nations ethos. That it is appropriate for us, even non-Natives, to appreciate that ethos, in story and in life, is confirmed by the honored late Elder Louis Sunchild, who wrote—yes he wrote it—saying that "this is a concern that affects all humanity":

> *Kîspin ewaykoyikohk tanisitohtahk, awîyak mistahi tamiyotôtahk misowîsih tamiskowehitâmâsiw tahto kîsikaw opimâtisiwinihk, mîna opimacihowinihk, mîna têsih manâcihtât.*

Which was translated by Walter Lightning (1993:223):

> For generation upon generation since time immemorial our people have taught these human truths and principles for the holistic survival of everyone.

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CHAPTER VIII. CONCLUSIONS

In Chapter II, "The Orality of Nature and the Nature of Orality," I attempted to demonstrate that the characteristics and qualities awarded by Walter Ong to oral minds are symmetrical with those awarded by ecologists to the ecosystem. The importance of this claim is that it sets a foundation for legitimizing a role for the maintenance of the tradition and medium of oral storytelling in environmental education. Establishing that orality is essentially embedded in what Ong calls "the lifeworld," establishes that the possibility of the maintenance of oral tradition is itself an antidote to the cosmology of modernism. The importance of oral tradition in its implicit relation to place is to understand its strategic potential to ecological restoration and reinvigorated small civilization. Learning nature at the shoulder of an elder exemplifies not only human scale but also the way orality brings forth the qualities of nature.

The idea of building sustainable culture is generally viewed as a singularly material endeavour. If we follow the precepts of Native oral tradition, the rejection of dualism in that tradition would, I believe, indicate that the responsibility is also for dealing in sustainable symbolic systems. That is to suggest that there is the possibility of creating a symbol system which is neither sustainable nor healthy. The way we use symbols is part of their meaning. When knowing *through* symbols replaces experiential knowledge and, with virtual reality, when these symbols threaten to engulf the authentic in a rising tide of artificiality, the question of symbol system symmetry with nature becomes an absolutely vital concern for environmental education.

In Chapter III, "The Silence Before Drowning in Alphabet Soup," the vitality of silence was outlined as a necessary precondition and preparation for experiencing and witnessing resonance with the natural environment. I suggested that a pre-conceptual and spiritual communion can exist in which a non-linguistic meaning of nature and self can be experienced. I advanced the idea that this experience could guide engagement with information-based education, that silence is referential to an experience of unity. Without this fundamental experience of unity, I suggested that the anthropocentrism of alphabetic knowing would go untempered. By pointing to the legitimacy of experiencing the resonating silence and knowing the world on its own terms I pointed to the necessity for a reorientation in the practice of information-based environmental education.

The oral tradition of Native North America recognizes that the information of oral tradition is always empirically referential for checking the construct validity of the metaphors employed in the tradition. One manifestation of that referential check is story's consistent reference to local place. Elder storytellers consistently situate the telling of a story in time and place as an aspect of their profession of authority. In spite of my phrasing, that constraint should not to be understood as an onerous limitation, but instead as a mentally healthy praxis of joyous and sacramental interconnection with place. Without referential relationship with place the story, as it apprehends and represents place, is no longer in sensitive relationship, and is no long authoritative in cultural terms. The result of such disjunction would imply not having sufficient numbers of elements to be able to dependably assemble a holistic and interconnected story. Restoration of unity after description requires having all of the pieces to reassemble. This may explain some of the resistance of Native tradition to literate and electronic ways of representation which violate connectedness, authority, and empirical reference for checks of construct validity. That it is authority that is the concern, and not specifically the medium, however, is exemplified in the culturally-situated, mutli-media, computer-based environmental education program conducted with elders in the Hualapai language in Peach Springs, Arizona (see page 58 herein).

Because alphabetic literacy is under no such constraint to be immediately referential to physical place, a dangerous trend can be set wherein symbols no longer are subject to the empirical validity check and reunification required in interactive storytelling. The effect of not being referential to place may help explain some normative practices within environmental education, such as symbolizing environmental concerns in a journal, the *Whole Earth Catalogue,* with photographs taken from space, along with the claim that "we saw ourselves for the first time (1969) in those glorious photographs of the whole earth;" "we had to leave our planet before we could really see it" (Devereux et al. 1989:vi, vii).

Though one would expect environmentalists to be critical of the effects of information technologies, the field is heavily embedded with learning technologies, to the effective exclusion of storytelling and celebrations of mythopoeic traditions of place. The substantive pedagogical issue raised by this phenomenon concerns the relationship between knowing and behaving. Informational curricula and their technological engagement stand a very real chance of creating or adding to an alienation from place, an alienation which thoroughly contradicts the attempt to honour place and self in nature.

In Chapter IV, "A Profile of Recent Published Work About Environmental Education," the dominant paradigm in environmental educational research is laid out. It suggests a resolute belief in information manipulation for the objective of behavioral change. The relative unimportance of any grounding in empirical reference to the experience of nature indicates that the field is primarily grounded in information rather than in earth. A potentially corrective step in balancing the informational conceits would be the use of the school yard as a site for organic gardening and ecological restoration. The knowledge and engagement that could be engendered from comprehending the intelligence of the land on which the school is built might result first in an adaptation of the school's administrative structure to meet the democratically and physically grounded conditions of gardening and restoration as a growing of renewed spiritual connection that legitimizes story—and vice versa. Second, the practice might provide the ethos so that we can create our own stories in our own places. So too would it allow for basketball and lacrosse; the point is knowing what is right for that place.

There also appears to be a distrust of somatic knowledge in environmental education. Developmental schemes represented in the research literature are thoroughly set in the idea of a primacy of intellect at the expense of the wisdom of the body in engagement with land. It is worth considering that interrelated neglect of the body and of place may be outcomes of the bias of an information- driven curricula. Outdoor and physical/experiential relationship to nature might offer an introduction to a cosmology that would allow us to resist the fragmentary cosmology of information-driven environmental education.

The paradigmatic assumption of dualism, and consequently of alienation, in environmental education research literature would be obviated by adherence to Native environmental traditions, but those traditions have been made marginal, adjunct, idealized and romantic. In Chapter V, "Alienation and Integration," some historic Native contributions to environmental education are illustrated, but the appropriation of Native tradition has been unsuccessful except in a commercial sense. Normative environmental education, when it bothers to look at Native contributions, consumes what it wants. In making a distinction between what is legitimate environmental education and what is Native ethos, environmental education research has followed a racist tradition.

In Chapter VI, I address the matter of dualism in environmental education as articulated by Elder Raven Mackinaw. The Native ethos of interconnectedness, authority, and empirical reference for construct validity is an alternative to a dualist perspective. The victimization of the non-human and sub-human under the campaigns of dualism are generated from within a philosophy and practice of disjunction. Living and believing nature's interconnectedness requires acting *in* rather than acting on nature. If, as Neil Evernden has suggested, the homelessness of humanity is the root cause of its despoliation of the environment, then "re-placement" must begin with a philosophy, a grammar, and a practice of connection. Violation of the principles of this ethos have taken humanity to the precipice of environmental ruin. The reorientation of the culture of modernity will require a complex environmental sensibility that must be true to nature. Native environmental tradition demonstrates how "getting the words right" must also take place in the material domain.

A key element in the use of story is metaphor. Metaphor may refer to myth or ritual. The dissonance this imposes in the obsessive and compulsive search for normatively realistic and "relevant" curricula is, to say the least, controversial. Certainly, a curricular constraint for realism is of questionable maturity because it demands immediate meaning of place. "Fast meaning" stands in contrast to the unfolding over one or several lifetimes of ancient teachings of the mythopoeic tradition. "Fast meaning" is characteristic of the information explosion and confuses knowledge with information. It might not be inaccurate to say that the information explosion created the contemporary environmental problem of knowing more about the environment than we can understand. I resolutely doubt whether more information or its more skilful reorganization will dispatch the problem of how to understand its sheer volume.

When Raven Mackinaw said that "wilderness and storytelling are the same thing" he affirmed what Kieran Egan had speculated about concerning the symmetry of oral tradition and ancestral lands. Learning the required principles for getting the words right in settler culture is not likely to emerge when dualism dictates alienation where realistically only an integration exists.

In Chapter VII, I look to Kieran Egan for what can now be understood as the unconventional, albeit reasonable, claim that the practice of good oral storytelling is in itself good environmental education. I have elaborated this point in light of Raven Mackinaw's statement. The contemporary condition of humanity is that there is nowhere left to go to escape the problems wrought by violation of the natural environment. The once romantic and unrealistic promise of limitless frontier has been replaced by a similarly transparent faith in science's boundless ability to create workable alternatives from the raw materials of nature. The usual argument is that the prevailing cosmology of modernism, and post-modernism's technological implicitness, are positioned either to further perpetrate this faith or contribute to its timely demise.

There is also the possibility that it is time to listen to the world's indigenous peoples in order to be able to understand that each place comes with a set of principles whose authority will allow humanity to prosper but whose violation will spell certain demise. Story is a technology more ancient than any other form of knowing. It is an embodiment of land and, too, it embodies how humans make meaning. This place, Turtle Island, is what we must make sense of in the most resonant fashion we can, so that the principles which reflect the intelligence of this place can again become integral to our lives as other ancient principles once were before immigration uprooted us as indigenous people.

The stories we settlers brought to Turtle Island are not wrong but without reference to this place, new to us, they are displaced. We must learn to interpret our own stories from our richly diverse pasts to make sense of the richly diverse land in which we now find ourselves. Perhaps in so doing the voracious spirit of conquest will be tempered, and we will recognize that we are at home here. I do not believe that we can get to that place where we are ready to sing a song of homecoming if we maintain our fascination with virtual realities and information.

I believe that the foundations of environmental education are in First Nations ethos, and that they are generally overlooked by environmental educators. It is not being unduly alarmist to say that the questions raised in environmental education are questions that demonstrate that the world is at stake. There is every possibility that we will get our solutions to that problem wrong. There is not enough time for that kind of mistake. It is some conceit to believe that settler arrival could know so quickly what indigenous culture has spent tens of thousands of years figuring out and articulating. It is time to accept First Nations perspectives about the environment on their own terms. It will make many of us uncomfortable.

Native co-professional partnership must have some place in figuring out how to reorient modernist settler culture. This makes it incumbent on settler culture not only to make its own stories but first to listen to the stories that have preserved the ecological integrity of Turtle Island. To do so will require learning how to learn that we are all interconnected; and that so too must learning be "interconnected." The mythopoeic and the people who practice it with such precise reference to place and empirical validity have for too long been ignored by those whose disjunction is the major problem of settler culture.

My recommendation then is not immediately to seek out an elder, but to return to one's garden to get to work on growing our own authority.

To learn the solidarity of earth is to know that we are all one big union. I now turn this matter over to the elders who rightfully know whether these proposals are correct and whether I have "gotten my words right." And, if so, to finally go home again. With thanks.

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